

Aviation News

MCGRAW-HILL PUBLISHING COMPANY, INC.

NOV. 5, 1945



Navy's Glider Bombs: Two of the war-developed aerial weapons that have just come off the secret list, the radio-controlled Taylorcraft-built glider, top, and the "glomb" (glider bomb), bottom. The Taylorcraft LBT-1 carries 1,670-lbs. of explosive at more than 280-mph., while the LBE-1 glomb carries an undisclosed bomb at 300-mph. Production of both has been discontinued.

Intensified Research Work Forecast by Developments

Navy unveiling of highly advanced television and automatically guided missiles indicates move to seek increased funds.....Page 7

Rapid Switchover to VHF in Private Plane Sets Seen

New Bendix Flightweight equipment to be built only for very high frequency work; early federal ruling on channels awaited.....Page 15

Ship Firm Plans Intrastate Airline, Beyond CAB Control

Waterman, which first applied for interstate air services in 1940, schedules Mobile-Muscle Shoals flights beginning Nov. 15.....Page 37

Airport Operators Face Crisis As 20 Towers Close

Bulk of municipalities and private interests are finding cost of maintaining war-expanded service is far too costly.....Page 41



HE'S on the ground while YOU fly!

It's a great sight to see the Aeronca sign on a dealer's hangar. You know that back of it is a solid expert who knows his business and is ready to deliver complete service—that back of him is the planning of a 15-year old company, nation of the first flight plane ever built.

The idea of presenting airports all over the country goes naturally out of Aeronca's long experience in the field.

They knew that personal planes need landing fields and service so you can fly everywhere—part or car needed roads and service stations as everyone needs.

Aeronca's new plane designs fit personal needs, too. Equipment to suit your taste, 2 passengers, to family capacities. Latest equipment, like bicycle landing gear and electric starters on some touring models. All easy to buy and easy to fly! Complete

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(Report Agency—American, Inc., 20 Beaver Street, New York 6, N. Y.)



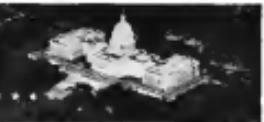
AMERICA'S PERSONAL PLANE

AERONCA

lets an important message for oil-minded people

THE AVIATION NEWS

Washington Observer



COMPOSITE POWERPLANTS—The Navy's recent report on research stand some speculation regarding composite powerplants. While noting that a composite powerplant, consisting of a reciprocating engine and a jet unit, has great promise, Navy declared this type particularly effective "for dive bombers, torpedo bombers and long-range patrol land planes." The Ryan Fireball, the Navy's most recent unconventional aircraft, has a composite powerplant and is a fighter but no mention was made of fighters in the Navy comment.

* * *

POST-WAR CARRIERS—The Navy's aircraft carrier fleet fared well under legislation just approved by the House which expresses the "sense" of Congress that the Navy should maintain three carriers of approximately 45,000 tons; 24 carriers of approximately 37,000 tons; 19 light carriers of approximately 11,500 tons and 79 escort carriers. This is the present position. The legislation lacks the effect of law, however, and is merely an expression of congressional intent for Navy guidance.

* * *

SURFACE CARRIERS OUT—Close observers here are virtually in choice for a change in CAB opinion that surface carriers should be left out of trunk airline operation. Reinforcing this belief is the report that President Truman let it be known a few days ago he agrees with this interpretation of the Civil Aviation Act. Some membership executives recently have been holding hope CAB would change its views in the Latin American state decision expected soon.

* * *

STATE JURISDICTION—CAA will make a strong attempt to resolve once and for all the question of respective jurisdiction by the federal government and by the states at the meeting of the National Association of State Aviation Officials, opening today in St. Louis. Representatives of NASA some time ago agreed, subject to association approval, to CAA jurisdiction on the matter, but CAA has some additional ideas it hopes will be accepted at St. Louis.

* * *

SURPLUS ENGINES—Last proposed use of surplus aircraft engines is in pumping, electric power and other stationary installations needed in China as response to inquiry. Chinese engineers in Washington say tests have been under consideration but small hope was held for success.

* * *

CONGRESSIONAL VIEWPOINT—Perhaps epitomizing a Congressional return to a practical viewpoint as far as military aviation expenditures are concerned is the following exchange between Gen. Arnold and Rep. Clarence Cannon (D-Mo.), chairman of the important House Appropriations Committee: Rep. Cannon—Gen. Arnold, your name has become synonymous with winged victory. We owe credit to a great many people for victory in this war; we owe a considerable debt, but we certainly owe as much to you, if not more, than to any other one man. Gen. Arnold—Thank you very much Mr. Chairman. Rep. Cannon—We believe we will be able to save a great deal of money in your branch of the service, General. Your service is a very costly one...



The model of a grinded winkle, a Navy weapon, planned to carry 1,000-lbs of general purpose explosive to the target at 400-mph. The ring at the top houses the powerplant.

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It never cost so little to get places so quickly
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member, delicious meals are served cloth "on
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AVIATION NEWS • November 5, 1945

VOLUME 4 • NUMBER 15

Aviation News
McGraw-Hill Publishing Co., Inc.

November 5, 1945

AERO-SCIENCE EMPHASIS

Intensified Research Programs Forecast By New Developments

Navy unveiling of highly advanced television and aerodynamically guided missiles highlights crystallization of armed service plans for increased experimental funds; maintenance of aeronautical leadership is keynote.

By WILLIAM KROGER

Plans for keeping U. S. aeronautical leadership through intensified research appear clearer in the wake of disclosures of some of the achievements to date of the Navy, the aircraft industry and National Advisory Committee for Aeronautics, together with fuller details of the AAF's projected research budget this fiscal year.

Now comes the revelation last week of some of the most dramatic and plans for the future, as seen in some quarters as advance notice that greater appropriations for research will be asked.

In recent hearings before the House subcommittee on naval appropriations, Assistant Secretary for Air John L. Sullivan stressed that Navy's original estimate for research expenditures in fiscal 1946 was \$140,250,500,

► "That was reduced to \$81,000,000 when the estimates were forwarded to Congress," Sullivan stated. He emphasized that the Navy had not made the reduction, from which it is inferred that the Budget Bureau ordered the cut.

AAF research expenditures in the current fiscal year will be \$115,930,000, it was disclosed to Congress, with an additional \$2,400,000 being spent on controlled missiles. AAF's research expenditures also were drastically reduced by the Budget Bureau, according to Gen. H. H. Arnold. AAF asked for \$245,877,460.

An example of what it has been done in the new air weapons field, the Navy last week unveiled devices with such weird names as "Globo," "Gorgon," and "Gargoyle."

► Globo is a piloted glider carry-

The electronic equipment which makes these controlled missiles so accurate is being continuously developed, the Navy asserts. Vanished are "airborne radars which can initiate defense and automatic circuitry which can instantly release the airborne counter-rocket." Putting up the explosive on radar is the statement that a parrot bomber now carries 22 tons of electronic equipment weighing nearly one ton.

In aeronautics, the Navy believes the gas turbine for jet propulsion offers the possibility of great speed but "the gear turbine jet engine is not developed to the degree of reliability found in the reciprocating engine." Of special interest for the future is the turbo-propeller combination.

► Speed Problem.—With the development of such power applications, designers face the problem of compatibility met at high speeds, it was stated last week by Russell G. Robinson, chief of research examination of NACA. These see problems ahead, and he said immediately, Robinson testified before the House Appropriations Committee.

To meet the military's requirements, he said, the aircraft industry would like to have "five



"Gorgon": A jet-propelled guided missile, this shark-like device carries a 250-lb explosive charge at 350-rpm. It was developed at the Naval Air Materiel Unit, Jacksonville, Florida, and named Gorgon.

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HEADLINE NEWS — 7

Engineering Staff Unionization Draws Close Industry Attention

Introduction of new group to collective bargaining seen possible pattern for similar moves throughout country; overtime pay highlighted; Boeing, Convair patent right plans called model for all manufacturers.

Effects of the unionization of Lockheed's and, recently, Hughes Aircraft's engineering staffs may be expected to draw the close attention of all major aircraft manufacturers in coming months.

The one-time social and technological Engineers' and Architects' Assn. has assumed the status of an independent union to introduce the idea of collective bargaining.

➤ **Vanguard**—Number 1 engineer, and test unit, was the Burbank Chapter, which entered Lockheed Aircraft Corp.'s engineering division to sell professional and sub-professional engineers the idea that they could become as collectively strong as the employe production workers and take advantage of union benefits.

A former Lockheed draftsman, E. Konigberg, did a thorough selling job as business agent, and Burbank Chapter of EAA soon was able to carry NLBBS elections and become the bargaining agent for 1,000 salaried and hourly-pay members of engineering department.

Konigberg claims that engineers who call themselves as "professionals" have been as ready to join as "sub-professionals," draftsmen.

➤ He says that Burbank Chapter has as members 70 percent of Lockheed's aerodynamics engineers, 50 percent of staff engineers, and 80 percent of "A" design engineers.

➤ Hughes Aircraft's engineers at Culver City, Calif., voted 78 to

32 for EAA to be their bargaining agent.

The Trost & Barton aircraft X-ray firm is believed to be next in line for an EAA collective bargaining vote, and there have been a scattering of membership inquiries from the engineers at both the Douglas and the Northrop aircraft companies.

Based upon its aircraft success,

EAA

now is spreading its organizing activities into the government service, paying particular attention to the technical interests among engineers of the California State Division of Highways.

➤ **Overall Uniforms**—As a result of this diversion from the original overall goal, EAA soon may consolidate its pioneering Burbank Chapter and other aviation groups into a single "Aircraft Chapter, EAA" with various sections for the handling of business of various organized aircraft manufacturing firms.

When Engineers' and Architects' Assn. was organized in 1944 its purpose was to provide the engineering profession with a medium for swapping technical information and with a focal point for their mutual interests.

During the "Depression" EAA did a creditable job as an employment agency and job clearing house for its members.

Inquiries of that period probably engendered a gradual growth of the plan to create a union that might strengthen the position of engineers, and EAA membership rolls.

➤ **Present Problem**—Today EAA sees inadequacy in the status of production workers who are given additional pay for their overtime work and engineering "professionals" whose project entanglements frequently leads to added hours of work without added compensation.

Also an objective is the improvement of rating and review of engineering job classifications.

Truman Talk Off

Cancellation of President Truman's November travel engagements because of the press of affairs in Washington will cause him to miss the Third National Aviation Show at Oklahoma City, Nov. 18-21. He was scheduled to have addressed the opening day of the show.

Low Sales Return Percentage Marks Wartime Financial Study

Compliance presented to Congress shows that ratio of profits to net worth, however, was increasing at same time; picture air industry changes presented in averaging of statistics from 17 large manufacturers.

The great changes wrought in the financial structure of the aircraft industry during the war were brought to light by a percentage drop in return on sales as measured against pre-war years, while the ratio of profits to net worth was increasing, it is revealed in figures put before Congress.

The statistics were based on reports of 17 large manufacturers compiled by the Office of Price Administration and furnished to Sen. James E. Murray (D-Mont.). The compilation averaged figures for the years 1938-39, and compared them with like calculations for 1944.

➤ **See-Saw**—Companies reporting net profits after taxes in 1944 of \$13,686,000, or net sales of \$45,620,000, a profit increase of 397 percent over the 1938-39 period. However, while profits in the previous years were 16 percent of sales, this dropped to two percent in 1944.

Net worth, in the statistics used, is the sum of common and preferred stock, surplus and surplus reserves. In pre-war years, profits after taxes were 16 percent of net worth. In 1944, this return increased to 26 percent.

The oddity of return on sales decreasing while return as net worth increased might be partially explained by examination of proportional increases. While profits were jumping 397 percent, net worth was going up, but to a lower relative scale, an increase of 33 percent. Profits did not increase as fast as sales, which skyrocketed 4,500 percent due to higher costs of labor, materials, etc.

The effect of the high wartime taxes is also reflected in the proportionate revenue figures.

➤ Before the war, profits before income taxes were 13 percent of net sales and 30 percent of net worth. In 1944, profits before income taxes were seven percent of net sales, but—indicating the extent of under-capitalization of the industry—60 percent of net worth.

What the war means financially is the companies report-

Lee Stays on Cab

Jah Lee will not resign from the CAB, nor will he run for governor of Oklahoma in the next campaign, he informed AVIATION NEWS. For several reasons various rumors will have been circulating that Lee would leave the commission for the future. His statement follows:

"I have been requested by AVIATION NEWS to comment on reported rumors to the effect that I will resign from the Civil Aviation Board. I should like to clear up this issue. I have no intentions whatsoever of leaving. It is true that I have received many requests from friends that I enter the gubernatorial campaign in Oklahoma. I am deeply appreciative of this interest, but my main concern is commercial aviation is in its most crucial period of planning, development and promotion, especially in international and local feeder services. I feel that an exceedingly important job remains to be done here during the balance of my term."

➤ **Debt Rise**—Long-term debt, in the statistics available and characterized as obligations extending one year or more, increased about 10 times during the war, perhaps indicative of the uncertain future of the industry, rose only 27 percent, contrasted to the great increases in other categories.

Companies on which the GPO tabulation was based are: Aero Supply Manufacturing Co.; Air Associates; Aviation Corp.; Bellanca Aircraft Corp.; Beech Aircraft; Bremec Corp.; Cessna Consolidated Vallee; Douglas; Martin; Grumman; Lockheed; North American Aviation; Republic Aircraft; Steel Products Engineering Corp.; United Aircraft; Warner Aircraft Corp.

Navy Started Early

All of Navy's experiments with advanced types of aerial weapons were not born overnight. As early as 1940, a radio-controlled piloted torpedo plane was directed by telephone from the rear seat as an attempt to maneuver a maneuvering destroyer. Its torpedoes scored a direct hit. From such experiments, the Navy developed several types of aerial drones which were used against the Japanese at Rabaul.



BACK-TO-BACK BOMBER:

Carrying a crew of two, seated back-to-back and with an emergency exit in the rear of the fuselage, this Herkules 229 won third as a night fighter-bomber in 1946-47. A top speed of 385 mph was reached at 21,000-ft. powered by two BMW 701's or G8 609's. Range has been estimated at 350 miles at optimum fuel economy setting. Of all-metal construction, it weighs 28,000-lb gross. Front view of the ship emphasizes the thick lines of the nose-dollie-terminated fuselage.



RADAR TAIL TURRET:

This radar scanning installation which will track the rear path of a bomber as an enemy plane attacking from the rear, before it comes into visual range of the gunner, was disclosed recently at Wright Field.

Mail Pay Rate Set For "Big-4" Lines

Board order establishes 45 cents per one-mile, retroactive to Jan. 1, for TWA, AA, EAL and UA.

A mail pay rate of 45 cents per one-mile, retroactive to Jan. 1, 1945, was set for the "Big Four" air carriers in CAB orders issued last week.

The action closed a proceeding begun by the board when, on Jan. 1, it directed American Airlines, Eastern Air Lines, Transoceanic & Western Air and United Air Lines to show cause why their mail rate should not be reduced from 60 cents to 32 cents per one-mile.

Security Need—Subsequently, the original orders were extended to provide for the 45-cent rate (Aviation News, Aug. 28). Upward revision was necessary, CAB felt, to provide reasonable security against fluctuating and unpredictable operating conditions.

Williams of the carriers to accept the new rate was expressed at a brief hearing (Aviation News, Sept. 16). TWA, however, accepted reluctantly, asking the board to make the rate effective on Oct. 1.

CAB member H. C. Branch, in a separate concurring opinion, indicated that he will support an allocated mail cost formula as the solution to mail rate-making when conditions are favorable. "I believe," Branch said, "that a sound permanent policy requires that service mail rates be closely related to the costs of the mail service, and conditions now were more stable so that rates could be determined and predicted with greater confidence. I would strongly urge the board to adopt a more precise procedure for deriving costs of the mail service and to place great reliance upon the costs derived."

He agreed with CAB's action in broadening considerations to include several carriers, maintaining that costs could be used to establish service mail rates by shifting attention "from the per-passenger costs of individual carriers to the reasonable average costs of the group." Branch also said he was opposed to the 45 cents per one-mile rate because it "continued in effect a general subsidy for a carrier having no 'need' for such subsidy payments and was, therefore, unusual and contrary to the intent of the act."

ACC Topics

Seven prime topics now are under consideration by the Air Coordinating Committee composed of the Secretary of State, the Secretary of War for Air, Lovett, Assistant Secretary of Navy for Air, Sullivan, Assistant Secretary of Commerce, Barbers and Dr. Welsh Poppe, Administrator of Civil Aviation, executive secretary.

The committee, which has just issued a comprehensive report on the demobilization of the aircraft industry (Aviation News, Oct. 29) now has four committees under consideration:

1. Foreign Air Rights—Created by U. S. flag aviation, members of the Government work, and prepared programs for action. The Permanent International Commission on Demobilization of the aircraft industry, post-war accountability to the general public of technical data concerning wartime aviation experience, commercial possibilities of lighter-than-air aircraft and post-war policy respecting air telecommunications affecting aviation.

As the plan of the British group admittedly experimental, the U. S. industry is recommending a similar service for two main reasons: (1) the former, just before the war, aircraft manufacturers in this country sold more abroad than the rest of the world combined. They feel that nation's aeronautical products are well-known and proven, and that therefore no goodwill program is required.

2. Competition—Secondly, the organization of the industry in this country, with its much greater emphasis on competition, does not lend itself very well to the innovation of the SHAC. While the companies comprising the British association are competitive, their competition in the export market is rndividually the nation's national interest to have a free exchange, perhaps even to the extent of sacrificing an individual manufacturer's share in it.



BEECH BOMBER:

New photo of the 22-mm. cannon-armed Beechcraft XA-35, a low-level attack bomber powered by two Wright R-2600 engines. The experimental craft was on display at the recent air fair at Wright Field.

Army's All-Radio Weather Unit Studied For New Civil Air Use

Elimination of optical tracking of radiosondes provides data up to 60,000-ft despite visibility crudeness; highly accurate system is joint project of Signal Corps and Farnsworth corporation.

A balloon-borne radiosonde and a ground receiving set which tracks the balloon and gives the direction and velocity of the wind and other weather data up to 60,000-ft has been developed by the Army Signal Corps in cooperation with the Farnsworth Television and Radio Corp.

About 300 complete sets, produced since 1943, have performed valuable services for the air forces in combat. Now, the Weather Bureau is considering operation of the equipment for the benefit of civil aviation and the many other civilian activities interested in weather.

Production Progress—Experimental production by the Signal Corps was started several years ago. The earliest direction finder was "nearly the size of a box car," company officials said.

The new radio set, SCIN-616, is designed to replace optical tracking of the balloon, which is limited by lack of visibility during rain, fog, darkness. It is nearly impossible to track balloons in the Americas, for example. Optical tracking also can cause a loss of ascent, often uncontrollable.

Speed and direction of the wind is calculated from angles of azimuth and elevation taken during flight at one-minute intervals. No other measurement of data is obtained simultaneously.

Continental Control—The new Farnsworth-Signal Corps system employs radio direction finders at the ground receiving station. Course of the radiosonde balloon can be followed from the time it leaves the ground till it burns or goes out of range.

Elevation and azimuth angles of a radiosonde transponder are obtained from the highly-accurate radio direction finder. Exact ascent rate is determined from pressure data taken and transmitted automatically during flight of the balloon.

A ground receiver attaches a recorder of temperature and humidity of the air surrounding the balloon, and its height. Regardless of visibility, the electronic radar

can locate the radiosonde transmitter at any given moment.

Three Units—The equipment consists of three units: (1) The balloon with radiosonde and parachute; (2) the SCIN-616 direction finder, which has an azimuthal and elevation angle accuracy of about 45 degrees; (3) the radiosonde recorder unit. There are also power supply, hydrogen generator, and receivers.

Wind direction and velocity forecasts are valuable not only in the performance of air trip schedules, but also for taking advantage of air currents to save fuel.

Company states that if the B-29s flown from Tokyo had possessed all predetermined information on the winds they might not have missed their objective, Washington, by 540 miles. The armed forces use wind data also in making ballistic corrections in aiming large guns.

The radiosonde suspended from the balloon emits a radio-frequency of 387 megacycles. The signal is

Hotel Landings

The West's first downtown helicopter landing site will be constructed atop the Hilton Hotel in Los Angeles. Cost is part of a \$42,500,000 addition for which plans are being drawn and on which construction is expected to start early next year.

The addition of the rear of the present building and overlooking the city's business, will bring roof area to 328 by 96 feet with the helicopter deck created above the roof of a super club which will be demolished to make room for the hotel. A lower in the center of the flat section of the building will be equipped as a service tower for the deck. United and Western airlines offices are on the street level floor of the hotel.

of constant amplitude and constant frequency, except for short intervals (0.005 second) of frequency modulation, controlled by an electrical resistance thermometer and other factors. The FM channel activates a recorder on the ground of temperature, humidity, and balloon altitude. The DM channel direction finder also operates on the 387 megacycle signal. The radiosonde with batteux paper-parachute and cord weighs about 3.83 pounds.

Aircraft Technique Used In New Production Plan

Northrop Grumman, Inc., a wholly-owned subsidiary of Northrop Aircraft, is using surface fabricating techniques in manufacturing head tracks and industrial wheels of light materials.

Five times ready for the market will be industrial wheels, cast wholly of aluminum with hard rubber tires riveted firmly on the wheel by a new process. Although they weigh as little as three pounds, the Northrop Grumman wheels are built to carry 40 percent more weight than any wheel of equivalent size.

Solid Frame—The head tracks have a frame cast in one solid piece of aluminum. Weights of three sizes weigh only 26-lbs., yet have a stress-tension under a 5,000-lb. load.

Northrop Grumman, formerly Seaford Cal Foundry, was the second largest manufacturer of aircraft aluminum and casting on the Pacific Coast during the war.



CARRIER RADAR:

These complex devices are the result of development of the superstructure of the 45,000-ton aircraft carrier Franklin D. Roosevelt which was commissioned recently by President Truman.

Nine Air Firms List Post Changes

Gardiner to NWA; USI becomes CAL secretary-treasurer; Duncan resigns AAI; Cooper to resign Pan Am; Fenwick leaves Hughes; Beck resigns Lockheed; Coogrove gets Avco post; Harris, Henry return to PCA; Home becomes COA official.

Resignations and administrative changes in aircraft companies and airlines disclosed late this week were:

Col. William Tudor Gardiner, twice governor of Maine, has been elected to the board of directors of North American Aviation. Colonel Gardiner had a brilliant career in World War II and among other posts was chairman of the joint air committee which equipped the French air force in North Africa, Sardinia and Corsica. He also served as director of intelligence for the Eighth Air Force.

John C. Cooper is going on a leave of absence from Pan American Airways, preparatory to returning as vice-president and assistant to the president to become a member of the Institute for Advanced Study at Princeton on a research project having to do with the legal, political and economic problems of international air transport. He will continue as a member of the board of directors of Pan Am. Cooper is now chairman of the executive committee of the International Air Transport Association.

Hugh M.L. Frazer who resigned as general sales manager of Hughes Aircraft Co., Culver City, Calif., after the company abandoned plans to enter the commercial transport field. The company will continue to concentrate upon experimental brackets and it appears the projected Hughes freightliner has been shelved.

J. Morton Beck, vice-president in charge of manufacturing, Lockheed Aircraft Corp., and previously designer and manufacturer of the Beck all-wood, tri-motor transport, resigned after two years with Lockheed. The firm plans to

consolidate its manufacturing and material divisions.

R. E. Coogrove, vice-president of the Crowley Corp., control of which was recently acquired by the Aviation Corp., has been named vice-president in charge of sales for Aviation Corp. The company has entered into a contract to purchase controlling interest in New Idea, Inc., makers of a wide range of farm machinery and implements.

Col. Luther Harris has returned to PCA as vice-president, maintenance and engineering, after four years with the Air Transport Command. He served as head of ATC maintenance at headquarters and later was sent to Europe to set up maintenance for the Command.

Col. James Henry, formerly aide to Gen. Gee Lewis Brewster, has also been placed on inactive service and returns to PCA as assistant to the president.

William L. Home has been appointed executive vice-president of Air Cargo Transport Corp. He was formerly secretary and general manager of the concern, one of the first exclusive air cargo services in the United States.

Thomas J. Douglas has resigned as director of public information for American Airlines, to become vice-president in charge of public relations for Abbott, Kuehl, Inc., New York City. Col. New Smith, formerly chief of public relations for the Air Transport Command, has been appointed director of public relations, American Airlines System, with headquarters in New York. He will report directly to the chairman of the board. Smith was chief of public relations to the 20th Air Force and U. S. Strategic Air Force in the Pacific. He has been editor of the Chicago Sun and managing editor of *Newsweek*.

Joseph A. Uhl has been elected secretary and treasurer of Continental Air Lines in a special board meeting. Until recently assistant to the president to act as contract coordinator and liaison between the airline and the Continental-Denver Modification Center. Prior to going with Continental, Uhl was president of the Pueblo Savings and Trust Co.

AVIATION CALENDAR

Nov. 10-12—National Association of State Motor Vehicle Administrators, Atlantic City, N.J.
Nov. 10-12—Society of Automotive Engineers Annual Meeting, Detroit, Mich.
Nov. 10-12—National Association of Manufacturers, Meeting of the Executive Council, Boston, Mass.
Nov. 10-12—National Association of Broadcasters, Annual Meeting, Atlantic City, N.J.
Nov. 10-12—American Society of Mechanical Engineers, Annual Meeting, Hotel Washington, D.C.
Nov. 10-12—National Association of Broadcasters, Annual Meeting, Hotel Washington, D.C.
Nov. 10-12—National Association of Broadcasters, Annual Meeting, Hotel Washington, D.C.
Dec. 1-2—Bendix Radio Equipment Division Meeting, Bendix Corporation, South Bend, Ind.
Dec. 1-2—National Association of Broadcasters, Annual Meeting, Hotel Washington, D.C.
Dec. 1-2—National Association of Broadcasters, Annual Meeting, Hotel Washington, D.C.
Dec. 1-2—International Air Transport Association, Annual Meeting, London, England.
Dec. 1-2—Institute of Aeronautical Sciences, Annual Meeting, Lehigh University, Bethlehem, Pa.
Dec. 1-2—American Society of Mechanical Engineers, Annual Meeting, Hotel Washington, D.C.
Dec. 1-2—American Society of Mechanical Engineers, Annual Meeting, Hotel Washington, D.C.

Jan. 10-12—American Air Museum, Hotel Pennsylvania, New York.
Jan. 10-12—National Retail Merchants Association, Hotel Pennsylvania, New York.
Jan. 10-12—Institute of Aeronautical Sciences, Annual Meeting, Hotel Washington, New York.
Jan. 10-12—Annual Meeting of the American Association of University Professors, Hotel Pennsylvania, New York.
April 1-2—Midwest Aerospace Special Meeting, Hotel New Yorker, New York.

British Firm Shapes Canadian Subsidiary

Sir Ray Dakin, managing director of Hawker-Siddley Aircraft Co., Ltd., of England, has arrived in Canada to establish the Canadian subsidiary of the firm, A. V. Roe Canada, Ltd., at Malton, Ontario. Purchase of the government-owned Victory Aircraft, Ltd., at Malton, by the British group was announced some time ago (*Aeroway News*, Aug. 4).

While the purchase price has not been named, it was understood that part of the agreement of sale includes continuing of the airport at Malton, now the main Toronto airport for commercial traffic. Should the Toronto area get a new airport, the Malton airport is still to be kept in operation, condition.

"Lincoln's" Finish—Plans of A. V. Roe Canada, Ltd., have not been finalized but the company is completing production of five Lincoln bombers, unfinished at war's end.

PRIVATE FLYING

More Rapid Switchover To VHF In Private Plane Sets Indicated

New Bendix Flightlight equipment to be built only for high frequency work; early federal ruling expected on designation of channels.

By ALEXANDER MCQUELLY

Switchovers of private flying radio communications from low to very high frequency (VHF) may take place much more rapidly than has been previously indicated, according to reports current in industry and government circles last week.

One indication was the announcement by Bendix Aviation Corp. that its new Flightlight radio equipment for private planes would be built only for VHF work. Elimination of atmospheric static, and the reduction in size and weight for comparable output and performance made possible by using VHF are factors in this decision.

Channel One—It is understood, however, that another factor in the Bendix decision to make only VHF equipment for private planes, is the expectation that the three government agencies concerned—Radio Technical Commission for Aeronautics, Federal Communications Commission, and CAA, will act quickly to designate VHF channels for civil aircraft use and to clear up the other red tape now obstructing VHF conversion.

At the recent Dennis meeting of the CAA Non-scheduled Flying Advisory Committee (Aeroway News, Oct. 23) a proposal was approved to establish two pairs of national calling and working radio channels, each pair consisting of an air-ground and ground-air frequency, one pair for airport traffic control and the other for airway communication stations.

It was pointed out that these channels would be "canceled" and would serve the private pilot at the expense of inconvenience and delay, which is the price he pays for reduction of his radio equipment to a minimum weight and cost that will permit its installation in his lightplane. It

was indicated that the frequencies selected would be those which would permit the simplest construction of the airborne radio equipment.

The non-scheduled committee in approving the proposal has urged Administrator T. P. Wright to work for its adoption by FCC, the final authority.

Bendix Plane—Bendix radio equipment for personal planes, to be manufactured at Baltimore, includes:

A range and broadcast receiver equipped with vibrator power supply and direction finding attachment, priced at about \$85.

A transmitter which may be added to the receiver, giving the pilot two-way communication with any station up to 200 miles away depending on altitude. Price of the transmitter has not yet been set.

A "transceiver," which combines the two units and which may sell for \$150-\$175.

A portable double-purpose receiver for commercial or aural broadcast for use in or out of the plane, equipped with a built-in loop antenna enabling the set to be used as a direction finder in the plane. It will operate either from a self-contained power pack or from 110 volt AC-DC current.

A loop antenna for direction finding, hand operated with a 300 degree azimuth scale. When this is attached to the direction finding attachment of the larger receiver it equips the pilot for "word off" direction finding. Price of the antenna and scale is approximately \$75-\$85.

Booklet Out—Bendix is announcing its new radio line in a booklet "For Wider Horizons" which explains the utility of radio in personal planes in non-technical terminology.

Shorter Takeoffs

Reduction of airport use through reduction of personnel aircraft for short takeoffs and landing runs is seen by John M. Green, assistant to the Civil Aeronautics Administrator for personal flights as a likely, but little-explored solution to the problem of excessive real estate investment in processed urban areas and landing strips. Pointing out that at least one plane (presumably the Lockheed Little Super) has already been built which can operate satisfactorily from a 100-foot long runway, Green urged further research in that direction before a recent RAE meeting in Detroit.

A check with government agencies in Washington indicates both CAA and FCC are willing on recommendation of the Radio Technical Committee for Aeronautics, to take action on channel designations. Some industry sources are hopeful action will be taken within the next two weeks.

Although Bendix has made an advance announcement of its new equipment it is understood that it will have very few if any production radios completed before January, and presumably will not begin production of its transmitting equipment until the channels are designated.

University Airport Established In Ohio

Kent State University, at Kent, Ohio, is establishing a college aviation training program at Kent airport, purchased for \$40,000 in 1943 by the school.

The field, formerly called Snow Field, is the oldest airport in the Akron area. It will be operated by Rudy Van Devere, manager of Akron Airways, Inc., who will have charge of student flight instruction, while A. W. Paton, manager of Goodyear Aircraft Corp., and member of the university's industrial arts faculty, is in charge of ground school courses.

Veterans First—First students to receive instruction will be returned AAP veterans with some flight experience who have enrolled at the university, and who are anxious to get flight instruction.



Col. William Tudor Gardiner, twice governor of Maine, has been elected to the board of directors of North American Aviation. Colonel Gardiner had a brilliant career in World War II and among other posts was chairman of the joint air committee which equipped the French air force in North Africa, Sardinia and Corsica. He also served as director of intelligence for the Eighth Air Force.

John C. Cooper is going on a leave of absence from Pan American Airways, preparatory to returning as vice-president and assistant to the president to become a member of the Institute for Advanced Study at Princeton on a research project having to do with the legal, political and economic problems of international air transport. He will continue as a member of the board of directors of Pan Am. Cooper is now chairman of the executive committee of the International Air Transport Association.

Hugh M.L. Frazer who resigned as general sales manager of Hughes Aircraft Co., Culver City, Calif., after the company abandoned plans to enter the commercial transport field. The company will continue to concentrate upon experimental brackets and it appears the projected Hughes freightliner has been shelved.

J. Morton Beck, vice-president in charge of manufacturing, Lockheed Aircraft Corp., and previously designer and manufacturer of the Beck all-wood, tri-motor transport, resigned after two years with Lockheed. The firm plans to

BURBANK, CALIF. Private Pilot Alvin F. O'Neil, 30, of Glendale, Calif., (left) and his passenger, Lester Thompson, 26, of Glendale, were made aware when the Burbank police stopped their car that they had been driving over the speed limit on March 10. The pilot was flying his plane at 100 mph. He had just come from the airport at Glendale, Arizona, and flew approximately 10 miles to Burbank. The two passengers, who were not licensed, were not aware that the police had stopped them until the police officer informed them that the plane was flying at 100 mph. They had driven over the speed limit for 10 miles. The police officer said he would not issue a ticket if the pilot would agree to take a flight test with him to determine if he had the right aviation knowledge of airplane operation, private aviation is illegal, he said.

CARHAGE, MO. Captain Peter Robert Hansen, 30, of Ft. Myer, Wash., 10 days before he was killed in a plane crash, had been engaged in a flight school, training military pilots when a private citizen who had been buying aircraft parts from Hansen's shop, approached Hansen about Waco Aircraft, Inc., of Carthage, Mo., which had recently sold him a biplane. Hansen had the right to sell aircraft parts to a passenger, but he declined to do so because he was not the owner of the plane. The customer asked Hansen if he could get him a flight lesson in the plane, but Hansen refused to do so because he did not have the required qualifications to teach passengers to fly.

New Plane Design Tested By Harlow

Unusually good performance and low-speed control characteristics are sought in a new West Coast plane designed by Max B. Harlow of Pasadena, Calif., and now undergoing test flights.

The low-wing monoplane is all-metal, powered with a 230-hp Lycoming engine, and has a gross weight of 2,850-lbs. A constant speed propeller is used.

Performance—Harlow reports that initial flights indicate a top speed of 170-mph., cruising speed of 150-mph., landing speed of 35-mph., and a rate of climb of 1,500-ft. per min. He says that if flight characteristics meet expectations, the prototype will be rebuilt as a four-passenger plane for the personal aircraft market.

The plane's N.Y.-37000 license was issued to Rheon Manufacturing Co., of Los Angeles, which gave financial and production assistance in development of the plane. Harlow said, however, that this does not indicate that Rheon will undertake commercial production of the plane.

The designer, who is a assistant professor of aeronautics at Pasadena Junior College, formerly headed Harlow Aircraft Co., and currently is a Sheen consulting engineer. He still is a director of Harlow Aircraft.

—Alexander McFarley

Briefing For Private Flying

William T. Piper, *Life Magazine's* reported recently likes to give visitors to the Piper factory at Lock Haven, Penna., a demonstration of "how badly it is possible to fly a plane and live." The word "demonstration," Piper quips, "ought to be kicked out of the dictionary." And when he takes a guest up for a ride in a Cub, he deliberately slips and slides his turns, "jerking contemptuously at the resulting gyrations" of the bank and turn indicator. "As long as the hell stays in the cockpit, that's all I ask," he says. All of which is part of the 64-year-old manufacturer's way of saying that private flying is made too difficult by instructors, and by complex federal and state regulations.

AIRCRAFT SURVEY—Contrary to recent reports, Waco Aircraft Co. has not shelved the idea of a biplane for its post-war plane. Instead, it is now conducting a survey to determine what market there may be for the biplane in the personal plane market, with a strong possibility that the post-war Waco might be a biplane if the market prospects look good enough. With the possible exception of Beech, which may make some of its reverse stagger-wing 5-place biplanes again in the immediate post-war period, Waco may turn out to be the only personal plane maker still making biplanes.

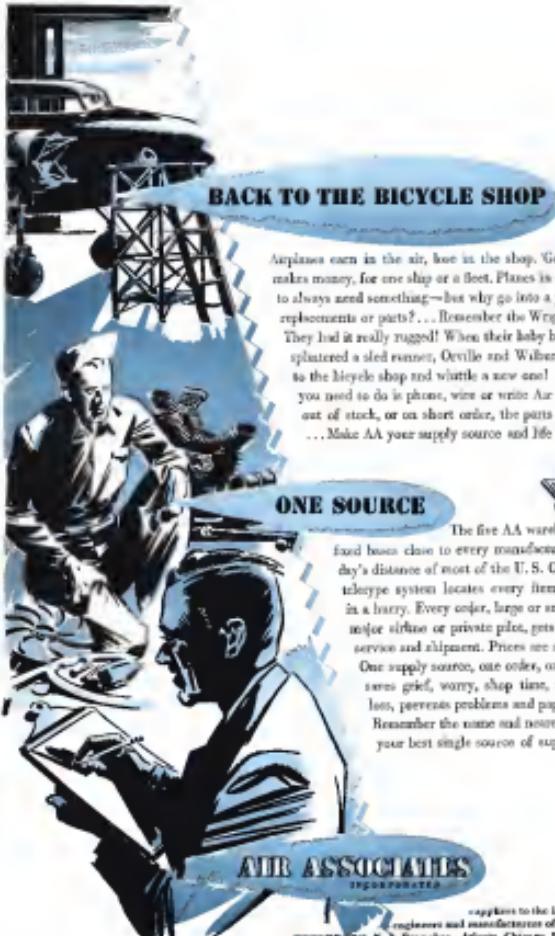
AIRPORT SERVICE REQUIREMENTS—Minimum requirements for service by airports in Minnesota soon may be a matter of state regulation. The State Aeronautics Department is now considering a recommendation of Commissioner L. L. Schroeder for the following minimum service to be required of each airport which the state license for public operation within its boundaries: Aviation fuel supply with octane rating suitable for aircraft used on the field, together with oil service; approved tie-down facilities for at least three times as many planes as are regularly based in the field; approved drinking water and sanitary facilities; adequate supplies of chocks and ropes, fire extinguishers at all fuel pumps, on flight lines and in hangars, one map in all airport offices telephone for public use; office or administration building to be located to permit public access without passing through flight lines; posting of all local airport safety regulations.

CHECK BEFORE SOLO—Concerning to curtail the recent increase in airplane accidents attributed to "hot pilots" returned from fast military equipment who ignore the performance limitations of lightplanes, the Aero Insurance Underwriters are suggesting a safe rule for aviators to follow: "For passengers and for old friends who haven't flown recently: a check flight before solo." The insurance group also urges that returning military pilots that they brush up on their Civil Air Regulations, which have been greatly modified recently and ask for a check flight before their return to civilian flying. The insurance group is offering a booklet "Here's How" containing a summary of revised Civil Air Regulations affecting air traffic rules, pilot certificates and general operations, to assist in "refreshing" the returned flyers on laws of the air.

NEW AIRCRAFT FIELD—A 360-acre airport for private flyers is being opened by John Chamberlain, president of U. S. Showplace Co., in the western outskirts of Akron, Ohio. Chamberlain's son, J. M. W. Chamberlain, owns and flies three planes, a Cessna, Vultee and Waco, and the father has been an enthusiastic air passenger for years.

GLOBE ENGINEERS—More volume production know-how is expected to be a major contribution of two recent additions to Globe Aircraft Corp., Jack F. Stepp, chief engineer, and John M. Wright, assistant chief engineer, both of whom came to the Ft. Worth company from North American Aviation, Inc. Stepp succeeds K. H. Knox who has been elevated to vice-president in charge of engineering. The two-place all-metal Globe "Swift" is a production airplane, built with machine tools, and is one of about four personal planes announced thus far which may be expected to lead the field in production volume, provided the demand meets expectations.

—Alexander McFarley



BACK TO THE BICYCLE SHOP

Airplanes even in the air, lose in the shop. Good maintenance makes money, for one ship or a fleet. Planes in service seem to always need something—but why go into a panic over replacements or parts?...Remember the Wright brothers? They had it really rugged! When their biplane busted a gusset or splintered a sled runner, Orville and Wilbur had to go back to the bicycle shop and whittle a new one! ...While all you need to do is phone, wire or write Air Associates. And out of stock, or on short order, the parts come up pronto! ...Make AA your supply source and life will be simpler.

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Plane Improvement Needs Listed By Mutual Aircraft Conference

Emphasis placed on safety by statement of Chicago party; design changes seen as means to lower insurance rates and basis for use of personal aircraft as normal travel vehicle.

Greater emphasis on safety features in design of personal aircraft is urged by the Mutual Aircraft Conference, Chicago, in a recent announcement specifying numerous features of the average personal plane which can be much improved for safety.

Pointing out that the statement is not intended as a criticism of manufacturers, but as an effort to point the way toward greater utility of the private airplane as a normal vehicle of travel, MAC cites its own insurance loss records to show that certain features of present day planes cause accidents or aggravate their causes. It urges the importance of reducing high aviation insurance rates by improving the accident record of personal flying.

Specific features of plane design where improvement is urged include:

- Cockpit construction.

- Visibility.

- Directional stability on the ground.

- Stall and spin characteristics.

- Propeller incidents.

- Uniform instruments and controls.

- Prevention of carburetor icing either by improved carburetor design or by fuel injection.

- Adequacy for maintenance to prevent engine damage.

- Non-flammable materials.

- Crash-proof fuel tanks.

- High flash point fuels and ignition type engines to eliminate a large proportion of aircraft fires.

- Recomendations for cockpit construction improvements call for lengthening the cockpit so that pilot and passengers when held by their safety belts can be thrown completely forward without striking the instrument panel, stick or other obstructions. Throttle, brakes, handle and other knobs or projections should be recessed into panel or door as far as to ease injury.

- A proposal to require all new engineer cockpit structures to resist shock from a forward impact.

Many airplane fuselages have been "unnecessarily fragile" even after allowance for weight limitations, MAC asserts.

Use of tricycle landing gear offers improved visibility over conventional landing gear, but increased emphasis is urged on design for full visibility forward while the plane is taxiing, and widest possible visibility in all directions while the plane is in flight.

► **Ground Stability**—The tricycle gear is also preferred for directional stability on the ground, although a steerable tail wheel offers "some help" in the conventional gear. A four-wheel undercarriage is recommended as more stable than any three-wheel arrangement, with suggestion that additional research needs to provide a better gear fairing which will spread the load more evenly over the body of the automobile.

The MAC recommendation is to make all planes fit into the general public speed limit or "spin resistance."

Standards of piloting skill are expected to be lowered as the number of licensed pilots increases. Highly maneuverable "hot" planes, and pilots who can handle them will continue to be needed but the primary demand will be for an transports with maneuverability secondary if set unfeasible.

Further development of the propeller airplane as a safeguard against propeller accidents is preferred over an alternate solution of placing a ring guard around the propeller.

► **Anti-Collision**—The conference points out that airplanes of today are sufficiently uniform in controls and instruments so that a driver of one make can drive another make with little or no instruction. While it is not likely that airplanes can approach this situation for a number of years, uniformity of instruments and controls which would prevent a pilot from making an error because of different location, should be a design objective.

Inspection of controls, drainage of sumps, and all other operations requiring frequent attention should be arranged so they are obvious and easy.

This would be in line with the recent CAA tendency to permit owners to perform certain maintenance functions themselves.

Use of dependable intro-turbines date on long-distance flights, one of the most serious fire hazards. Increased use of metal for wing and fuselage is desirable, with cellulose acetate dope or some other non-flammable material recommended for fabrics where they are still necessary.

► **Tank Tanks**—Plenty, easily burst gasoline tanks are not necessary on airplanes, as development of bullet-resisting tanks for warplanes has proved. Research for development of a crude resistant fuel system is recommended, with preference for an independent fuel tank unit over the type of tank which is integral with the wing, and strong recommendation for locating tanks in wing, and never in fuselage.

Elimination of the carburetor by use of fuel injection engines and raising the flash point of fuel above 100 degrees F will eliminate a large proportion of aircraft fires, the MAC statement concludes.



USED PLANES OR CARS?

Both used and new airplanes will be marketed at Cleveland at the Upstate Motor Sales used car lot. The lot, shown above with a Piper Cub above the automobiles, is operated by Norman A. Dill and Milton Laskin, partners, who have an arrangement with Herb Tanner, operator of Chagrin Harbor airport, to buy and be trusted to sell, at the airport, without extra charge.



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ALL-AMERICAN ENSIGN:

First plane of the \$3,000 Ensign, a two-place, all-metal personal plane built by All-American Aircraft, Inc., Long Beach, Calif., shows a West Court entry which makes it a strong bidder as plane with the best features among its engineering design priorities. Powered with an 85-hp Continental engine, the plane has a 53-ft wingspan, full-view Plexiglas bubble canopy, and features a unique type of "aerodynamic rudder" which the manufacturer says affords greater stability at low flying speed, and superior all-around characteristics.

Private Flying Due To Lag in Canada

Limited domestic production, high tariff rates expected to curtail it sharply.

Private flying in Canada is not expected to increase as rapidly as in the United States. A number of factors limit it: a relatively small Dominion lightplane production is in prospect, imported planes costs are high, maintenance is considerably more expensive and ground facilities are limited.



HUGE ENSCOPE CONTRACT:

Contracts for 2,700 Enscopes were covered in a distributor's agreement recently made between Allegheny Aerospace Corp., Ashtabula, Ohio, and the Engineering & Research Corp. Left to right, W. M. Thompson, and W. E. Schmidt, of the Allegheny organization, complete the agreement for \$5,350,000 worth of Enscopes with Harry Agster, Ercos sales manager. The order is one of the largest single lightplane contracts yet announced.

At first most lightplanes will have to come from the United States. Before the war only two major Canadian concerns were making this type: the Hawillard Aircraft of Canada, at Toronto, and Fleet Aircraft, Fort Erie, Ont.

Now, third, Cub Aircraft Co., Ltd., Hamilton, Ont., has entered the field. But none of these three has announced its post-war models and Canadian aviation circles expect no low-cost production for about two years.

► **Price Differential**—A few Canadian operators, on the other hand, hold franchises for the sale of

American-made planes, and American advertising is seen by most Canadians planning to buy their own aircraft. However, there is a 25 percent duty on imported aircraft, an 8 percent sales tax (which applies to Canadian aircraft as well) and the premium differential on the United States dollar now is set at 10 percent.

In addition, operation of private aircraft also is more expensive in Canada, and there are not as many airports for the private flier. Parts for aircraft, oil and gasoline all are regarded. Since most private planes in Canada would operate mainly in connection with flats for landing on the many lakes in the resort areas and isolated, the cost of operation goes up.

► **Airline Control**—Within two years, it is expected many ramifications will be building airports or small strips. Canadian requirements for private flying licenses also are expected by that time to have been made somewhat easier, for present pilot requirements and Department of Transport regulations deter private flying, and the industry as well as flying interests in general are endeavoring to have the regulations, many of which date back to 1921, eased to allow more people to take to the air for pleasure flying.

► For the present, therefore, Canadian private flying is expected to continue at the pre-war level with most lightplanes being operated by flying clubs and air schools.

Canadian Flight Bans Lifted By Government

All wartime restrictions have now been lifted on civil flying in Canada by Reconstruction Minister G. D. Howe at Ottawa.

Flights over certain military and naval establishments remain prohibited. Foreign non-commercial civil aircraft, mainly United States aircraft, may now be down over Canadian or Canadian waters, provided they conform with peacetime requirements and customs and immigration regulations.

► **Civil Craft**—Canadian civil aircraft may be flown within or beyond Canada without hindrance, and wartime restrictions against carrying cameras or taking serial photographs have been lifted.

Military flying restrictions imposed during the war have also been cancelled. During the war large areas of both Atlantic and Pacific coasts were closed to civil aircraft.

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THE GERMAN ECONOMIC PEACE HARD, SOFT...or WORKABLE?

IT is not surprising that difficulties are being encountered in spelling out the detailed terms of the German economic settlement.

The problem is exceedingly complex. The German economy is more or less inexorably linked up with the economies of Central Europe. Before the war that area—excluding the United Kingdom, Ireland and Russia—accounted for approximately one-third of the world's production, and for more than thirty-five per cent of world import and export trade. Germany's production constituted almost one-third of the output of continental Europe. It is obvious that the decisions we make now concerning the future German economy will exert profound influence not only upon the economy of Europe, but also upon that of the world. It is clearly not practicable to plan for an expanding world economy unless provision is made for Europe generally to share in the development.

Despite the magnitude and complexity of the problems involved, it is crucial that we and our Allies come to swift and decisive agreement. Both agreement is important both to world economic reconstruction, and as a demonstration that those who won the war can reach accord on the terms of world economic reconstruction.

We shall accomplish little if we continue to debate in terms of adjectives. Yet most of the public discussion to date has centered around whether or not the economic settlement with Germany should be hard or soft. To make progress we must first abandon open objectives. A good program is one that will promote our objectives—a bad program is one that will not.

What Are We Trying To Accomplish?

Upon the economic objectives of the German peace settlement there is little fundamental dispute. This is demonstrated by the—United States Directive to General Eisenhower of April 1946, the Report of the American Advisors to Berlin of July, 1946, the Report of the American Advisors to the Office of Military Government of Bavaria. The latter document stresses fundamental difficulties in developing a practical program for carrying out the objectives of the other two, but it does not question their formulation of aims.

What are the objectives that we are seeking to forward.

1. The dismemberment of Germany.
2. The elimination of German industries devoted primarily to armament production.
3. The assumption of reparations to compensate those nations which have suffered losses from German ag-

gression through direct war destruction and through the German policy of confiscating industrial equipment to her own use.

How Far Are We Agreed on Procedure?

There is also a wide measure of agreement upon detailed procedure for carrying out these objectives. Near, of course, questions the policy of confiscating German arms. Equally, there is agreement that German industry devoted directly to the production of war equipment should be confiscated or destroyed, and that essential measures should be instituted and sustained to prevent her from reconstituting such industries in the future. Since it is not practicable to prevent aircraft production and shipbuilding firms being diverted to military use, these industries are included in the arrangement category. And similar reasoning generally extends the list of prohibited industries to ball bearings and abrasives.

There is an additional category of German production which all of the Allied powers agree should be uprooted and permanently buried. It embraces oil economic activity which prior to Germany's utilization on an economic basis through robbery and other protection for the purpose of developing a self-sustaining economy to support armament war.

The major elements in this category are set out difficult to define. A great German industry for the synthesis production of gasoline and other oil products from coal never operated upon an economic basis. The cost of such fuel products to power Germany averaged almost four times what it would have cost her to buy petroleum products in the world market. It is doubtful whether these plants could be operated, postwar at a cost much below three times the world market price for competing petroleum products.

A similar situation applies to German synthetic rubber production. In an attempt to free herself at least partially from dependence upon supply lines, she produced synthetic rubber at a cost at least double the world market purchase price. Similarly, the synthetic or otherwise subsidized a considerable agricultural production, particularly in grain, for which her lands were as ill suited that Germany had to pay for German-grown wheat from three to four times the world market price.

These are merely outstanding examples. The maintenance of such activities in Germany constituted a drain upon the German economy other than an advantage other than that of preserving a self-sufficient economy for war. Hence their elimination is closely interrelated, and generally subscribed to, though the job of defining a exact list is far from easy.

What Is The Area of Dispute?

Unfortunately, this total catalogue of agreed-upon measures is not sufficient to provide either adequate security against a resurgence of German militarism or satisfactory retribution to her European neighbors for Germany's ruthless destruction of their industrial plant and equipment. To serve these two ends it is necessary to cut down the margin of German dominance in heavy industry—in steel, in electric power, in machine tools, and other industrial equipment. Unless such steps are taken, Germany will emerge from the war with sufficient industrial power to provide a continuing and perhaps uncontrollable military threat; and we should be perpetuating a dominance that was developed, as a matter of German strategy, to beyond the requirements of her civilian domestic markets or the export potential of normal trade.

German steel capacity was built to a wartime peak of twenty-four million tons a year. Before the war she had accumulated a share of machine tools greater than that of the United States, and her present stock of some four or five million tons of such tools is second only to ours. There is little debate over the necessity and justice of cutting down the margin of German dominance in heavy industry, particularly since it was built to its current levels through aggressive economic warfare to serve as an instrument of actual warfare. It is recognized, too, that in this sector of the German economy will be found the most useful reparations in kind for the countries damaged by German aggression.

The question is how much heavy industry and electric power equipment should be taken from Germany and transferred to others. The Russians, having experienced colonial war damage, are demanding very severe amputations. They talk of reducing postwar German steel capacity to three million tons annually.

The United States advises no amputations in the field of less extensive dimensions—we have suggested leaving in Germany an overall steel capacity of from areas to ten million tons. We naturally are concerned lest areas be taken that will cause a complete breakdown of the German economy. If this should happen while we maintain occupation forces here, we should feel responsible for severe war damage. German industrialists are prepared, at least in the main, to participate. Furthermore, both we and the British know that in the long run our people will not support control measures over Germany which go beyond our concepts of reasonable fairness consistent with security requirements.

It is no part of our intention, as has been suggested by some, to provide for a German economy that will serve as a buffer against Russian expansion. We know, however, that our weakest defense would be to concern ourselves now to enforcing control measures which our people would later repudiate as falling outside democratic concepts of justice. On this issue we cannot, and should not, compromise.

How Can We Resolve Our Differences?

The best chance for resolving the differences which have appeared between the Russian position on the one hand and the American and the British position on the

other lies in making a sharper distinction than has appeared in current discussion between long-term and short-term control decisions. All of us are agreed upon the policy of wiping out German military production and that part of German economic activity which has been run at economic loss to provide for a national self-sufficiency useful only for war purposes. But we are unwilling to enter into long-term commitments for holding down the rest of the German economy that do not constitute a war threat. That would unduly penalize future generations of Germans and drag down the whole economy of continental Europe.

It should be possible to reach agreement that measures for cutting down German heavy industry and power-generating facilities are immediate measures, and that the ultimate will be moderate long-term controls over an extended period. If part of the German establishment in these fields is transferred to countries whose manufacturing resources have been damaged by German aggression, it can serve the purpose of effecting a reasonable balance without destroying entirely incentives for a new generation of Germans to improve by peaceful methods their state in a peacetime world.

Such a program is consistent with the concept of building a healthy and balanced European economy in which general economic interdependence provides one of the essential safeguards against a resurgence of German militarism. We must still face the problem of agreeing upon how far the non-aggressive segments of German industry can be cut back at the present juncture without leading to disastrous breakdowns with its resultant class. Such definition, though formidable difficult, should not be beyond the capacities of the nations whose combined might brought victory, and who have the strongest of incentives for devoting a lasting peace.

The key to agreement lies in each of us doing his best to understand the position of the other. Russia must recognize that we cannot get our people to subscribe to the permanent regression of a European economy which would deny to millions of people any hope of normal economic betterment. We should try to understand Russia's conviction that she is entitled immediately to reimburse herself for her war losses by drawing upon the German industrial establishment that still exists. It will help to resolve our differences if we separate in our thinking steps that require permanent controls from those which are merely temporary expedients.

Neither of us will be forwarding our ultimate and continuing objectives if we impose controls that blight the development of so large and important a segment of the world as continental Europe. In such a blight lies the germ of a Third World War.



President, McGraw-Hill Publishing Co., Inc.

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JET PROGRESS

Turbines Developed For AAF Include Two Distinctive Types

Both centrifugal and axial flow models, revealed recently at Wright Field, are likely to power warplanes still on "secret" list; developments in progress for four years.

When the veil of secrecy was removed from some of the American gas turbines for jet propulsion and propeller drive at Wright Field recently it was revealed that developments had been proceeding for over four years on two main types. Both operate on the same fundamental principles but differ in arrangement of components which include (1) air intake duct, (2) compressor, (3) combustion chamber, (4) turbine, and (5) exhaust nozzle.

The first type is known as the centrifugal flow turbo jet, and the second as the axial flow turbo jet. This difference is somewhat analogous to that between the radial and in-line types of reciprocating engines; the centrifugal flow type being short and fat, and the axial flow type long and thin.

Whittle Design The centrifugal air flow unit uses a centrifugal air compressor, the nose casing of which is cast with several symmetrical channels radiating peripherally outward on all sides. The exact number of channels depends on the number of combustion chambers in the engine. These channels constitute the diffuser.



JET-POWERED VAMPIRE:

One of the first photos released of Britain's latest jet-propelled fighter, the de Havilland-designed Vampire (AVIATION NEWS, Oct. 22). Twin booms from the wings carry the tail plane which is placed high to escape the blast from the jet nozzle.

Engineer Guide

The Aerospace Engineering Catalog, 1945 edition, published by the Institute of Aerospace Sciences is being distributed. It is presented as a reference guide for aerospace engineers and contractors and contains specifications and engineering data on a wide variety of aerospace products available for post-war commercial and military planes.

The catalog lists the source supply of more than 200 items manufactured by more than 1,000 companies. The new edition offers technical information about aircraft products ranging from rivets to jet turbine jet engine parts. For the first time jet engine copy has appeared in a general catalog. The price of the catalog is \$1.00. Write A. Rader.

Axial Flow. The cigar-shaped flow units, being similar in diameter, are aerodynamically cleaner and better suited for installation in very high speed aircraft. The main components of that unit are arranged in line to present a minimum frontal area. The air is forced through in a continuous straight flow. Whereas the compressor and turbine of the centrifugal flow type usually are arranged in the axial flow they often are multi-stage. This means two or more sets of blades are used in each stage. The German D 31, the British 603 and Heinkel Hirsch 611 are all of this type. Even before the Whittle development the British were working on axial flow gas turbines for aircraft. Some were American engines for both Army and Navy, under the direction of the National Advisory Committee for Aeronautics.

American Units — In the late 1930's the NACA developed a highly efficient axial flow unit, and in the late spring of 1941 recalled from retirement Dr. William F. Durand and asked him to head all NACA research projects related to jet propulsion of aircraft. A committee was set up to present British jet proposals, and to encourage the Army, Navy, and U.S. industry and aircraft manufacturers to expedite American developments. It was decided Westinghouse would work with the Navy, and several axial flow units, including the "Yankee" turbo jet, are under development or in operation.



FLOATPLANE FLYING in eight planes is easy when Curtiss power Kinner engines. The high anti-shock qualities of Chevron Aviation Gasoline permit fast, easy acceleration and top power output for maximum in limited water.

PRIVATE AIRPLANES, too, "with power units like Kinner engines, get peak performance from Chevron Aviation Glass line. Use it in your plane—Chevron will make it look, a star in the sky.

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work with the AAF. Dennis the Whittle-type I-34 (J-31) and J-40 (J-33) units developed at the Lynd River plant, two west flow units were developed at Schenectady. The first two, J-34-100 (also designated XT-4) for the propeller drive installed in the Vultee XP-81. Details of this unit recently were released. The other was the TG-188 (now the J-38), which has an 11-stage axial flow compressor and eight combustion chambers.

All four of the AAF-GE units were on display at Wright Field. It may be safely assumed both the GE axial flow "propjet" (XT-6) and the GE axial flow "turbojet" (J-38) will power some of the experimental fighters, bombers and long range transports, hints of which have been appearing in the press.

Aero Income

The Aviation Corp. realized a net income, after taxes, in the nine months ending Aug. 31, of \$15,119,719 on sales totaling \$901,716. The net at Aug. 31 to 30 shareholders per share on 5,790,312 shares.

While sales fell considerably below the figure for the same period of 1944, net income was off slightly. After adjustments for reorganization, the results for the nine months ended Sept. 30, 1944 were \$12,964,871, or 35 cents per share, on adjusted sales of \$64,830,867.

The earnings announced by Aero do not include the equity in the consolidated earnings of Consolidated Vultee Aircraft Corp.

British Transport Production Rising

Early export sale of Viking transports now flying, British aircraft industry is well along on work on three others. Prospects are favorable for early export sale of at least one of the types now being tested, the Vickers Vikings.

Two Vikings have been completed and are undergoing trial flights. First deliveries of this British counterpart of the Avro 6 (AVIATION NEWS, July 9) will go to British Overseas Airways Corp. and to the Royal Air Force Transport Command. The second Viking will soon be allocated to the export trade in the not too-distant future. Peak production on the Viking, to be reached in autumn, 1945, will be from 25 to 30 monthly.

Exceeds Plan—In its first test, the Viking bettered speed and fuel consumption estimates by considerable margins. Planned to have a cruising speed of 210 mph., it achieves 232 mph. at 10,000 ft. with maximum week's mixture. Fuel consumption: gas 91 gallons an hour, against an estimated 105 gallons.

Foothold Future—In view of the doubtful future of diesel engines for aircraft use, 1,275-hp. is required to other than military applications and this can be provided by North American aircraft engines, which have a gross weight of 7,600 lbs.

A large version, the Tudor II, is under construction. It will have

a bigger fuselage, and will be used on Empire routes.

Av Glean—The largest aircraft in Britain's book, the eight-engine, 250,000-lb. Brabazon I, is now under way at the British factory, with work of progress on the fuselage. It has not been decided to use Centaurus engines.

Another type outlined by Lord Brabazon's commission, the Brabazon II is being built by the Avro-speed company under the name of Ambassador. It will be a two-engine aircraft in the same general category as the U. S. Curtiss-built Convairado.

Surplus Aircraft Diesels Up For Competitive Bids

Nearly 1,000 Gardner radial diesel engines, originally designed for aircraft but used during the war in tanks, are being sold as surplus on a competitive-bid basis by the Reconstruction Finance Corp. Bidding ends Nov. 14.

Of two types, one of 250-hp., the other 345-hp., the engines have never been type certified by CAA for use in aircraft. Both models are air-cooled. Both of the engines have been used and require repairs, while 683 are used but are usable without repairs. Radial and spare parts are available in quantity, RFP states.

Foothold Future—In view of the doubtful future of diesel engines for aircraft use, 1,275-hp. is required to other than military applications and this can be provided by North American aircraft engines, power for irrigation, cotton gins, air conditioning, ditching machines and electricity.



DOUGLAS TULSA PLANT:

New air view of the Douglas Aircraft plant and modification center at Tulsa, now listed as surplus

Each of the four hangars is 160 by 600 feet. They are connected in pairs by two-story structures.



CABIN TEMPERATURE CONTROL

A new electronic system, which controls cabin temperature with extreme accuracy, has been applied to both passenger and cargo-type aircraft interiors. These refrigeration systems eliminate the system loss of the cabin air at the selected temperature by maintaining the heat supply equal to heat losses through the use of better discharge components.



ENGINE TEMPERATURE CONTROL

Increased operating efficiency and longer engine life is assured by automatic engine temperature regulation. The Honeywell control system, which can be applied to either diesel or jet aircraft engines, maintains cylinder head temperatures at one or more engine exhausts within five degrees of the temperature set point. Instead of the usual fan and pressure valves on the combustion chamber, the temperature sensitive elements regulate automatically and quickly to temperature changes.



VALVES AND SWITCHES

Many aircraft control problems require only that one electrical valve or pressure operated switches. Honeywell valves and switches are specifically designed for maximum dependability and minimum weight. Typical uses are the Azimuth Steering legend switch, which sends to them when the pressure in a pressurized cabin drops below a safe minimum, and the two solenoid valves for better aircraft instrument insulation.

Honeywell Controls

FOR TOMORROW'S AIRCRAFT

TODAY we are proud with pride in the creative engineering by Honeywell which helped produce aircraft as supremely reliable as those of yesterday. Tomorrow, the same creative engineering, by judicious selection, continuous research and constant testing, will help to improve performance of aircraft and reduce expenses within a few degrees of the temperature set point. Instead of the usual fan and pressure valves on the combustion chamber, the temperature sensitive elements regulate automatically and quickly to temperature changes.



CHICAGO, ILLINOIS

Makers of the famous R. 8. Business Autopilot and the Auto-Flight Control.

MINNEAPOLIS
Honeywell
CONTROL SYSTEMS



Electronic Gages Set For Airliners

American Airlines has contracted to equip each of fifty Douglas C-47's recently assigned to the airline, with Stratosonic Pointer Fuel Gages, the first electronic fuel gages to be used on commercial transport planes in this country.

W. H. Enyart, president of Standard Aerocessories, Inc., made the announcement and also said that Douglas is spending the same gage on the DC-6's now being built for delivery to American and United Airlines.

Safety Aid—He listed two important advantages which he said would result from the institution of the new gage, first, the safety factor, pointing out that the mechanical type fuel gaging is not always unaffected by the factors. The Pointer Gage, he said, is accurate to within one percent and is unaffected by changes in flight altitude or temperature.

Second, he said, is the increase in payload which the gage permits, and added that "because of the unreliability of the previous methods of fuel gaging, the Civil Aeronautics Authority requires all commercial transport planes to carry excess fuel merely as a safety factor. The Pointer Gage will eliminate this necessity making it possible to increase the plane's payload by an equivalent amount."



Electronic Fuel Gage: One of the first aerospace developments in aeronautics to be turned to commercial purposes is this fuel gage manufactured by Standard Aerocessories. It consists of the three parts shown, tank unit, or condenser, at the left, the power unit which contains the electric components, and the conventional cockpit indicator.

The gage has been used on more than 20 types of combat aircraft. Its basic principle makes use of a change of electrical capacity of a condenser when the condenser medium changes from liquid to air. These changes are recorded on a conventional cockpit dial, the readings usually being in terms of pounds.

New Prop Design Tested By Hamilton

Development of a new hollowed propeller blade by Hamilton Standard Division of United Aircraft has been announced by Stanley A. Stewart, general manager, who said he believed it to be the lightest in the world for propellers of more than 13-ft. diameter. He added that while the new blade is not in wide-scale development, testing and flight experiments have established the integrity of the design. The production blades have passed Army and Navy type tests and samples are employed on six experimental planes under development for the armed services.

New Method—The blade, designed for use with new versions of the Hydrovane propeller and the Super-Hydrovane propeller, marks a departure from customary construction and materials methods followed by Hamilton Standard for the past 15 years. All previous large-scale production pro-

pellers of this company used the diamon-blade blade.

The company said the decision to turn to hollow-steel blades was made several years ago when it became evident that propellers would continue to increase in size and weight. It was also determined at that time that the diamon-blade, although lighter and more advantageous for use in propellers under 13-ft., loses its weight superiority when that figure is passed.

Hamilton Standard said that blade design studies had shown that for diameters exceeding 13 ft. to 15 ft., a hollow construction should be employed to achieve the lightest weight and that for smaller areas, the fabrication requirements of hollow blades result in no advantage, and even a disadvantage in some cases.

IAS San Diego Unit To Build Headquarters

Construction of a \$165,000 building for the San Diego section of the Institute of the Aeronautical Sciences will start soon after the first of the year.

Funds for the project, which will be built on Lindbergh Field, were contributed by Consolidated Vultee, North American, Douglas Aircraft, Ryan Aerocessories and Langley Corp.

The structure will be adjacent to the new proposed airline terminal building and the San Diego group, whose membership of 200 is the largest in the country, will use it as headquarters. A large radiotelephone stage facilities, dining room, lounge, offices and conference rooms will be included. Financed by a \$10,000 gift from Major R. H. Fleet, an aeronautical library will also be provided.

SKF Bearing Book

A textbook on bearings is being published by SKF manufacturers. A book of 278 pages, it is entitled *Bell and Holler Bearing Engineering*, and was written by Dr. Arvid Palmgren, who has been active in the field for 30 years and is winner of numerous awards.

The book is designed to serve as a fundamental text on all phases of bearing application to industry, and contains about 900 drawings and tables. First copies are being distributed free by SKF to heads of corporations, technical schools and colleges and libraries. Later editions will be sold at cost.

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CREATIVE ELECTRICAL
ENGINEERING...
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PERSONNEL

Col. Chisp, Comdr. Gay
Return To CAB Posts

Among armed service personnel returning to posts at the Civil Aviation Board are Robert W. Chisp, who was a colonel in the Air Corps and is now an attorney in the office of the general counsel; a position he held before he went on to become Commander George Gay has returned to civil life as a senior air safety investigator in the CAB's Safety Bureau. He served as commanding officer of certain aircraft service units No II during his last assignment in the Navy.

H. C. Repay has been appointed director of training for Broadfoot Airways, to direct the extensive plans for training of returning veterans. For the past two and a half years Brown was supervisor of training at Brown American Airlines, Dallas.

C. G. Turner, photo, becomes general manager of the new Airquippe Co., an independent division of Lockheed Aircraft Corp., which will design, manufacture and market aircraft ground equipment and accessories, tools all over the world. Maxwan L. Smith becomes controller and assistant general manager of the new company. They were both men employed by Lockheed for their present assignments and assume their positions with Airquippe will have offices in Bellanca.

Larry A. Radkins has been named controller of Standard Finance Mortgages with TACA-Air Agency, Inc. He has been assigned accountant and analyst with Transcontinental and Western Air, Inc., and he also been with Consolidated Vultee Aircraft Co.

Bennie H. Skaggs, a Navy veteran, has been named accountant at the Hollywood headquarters of Western Air Lines.

John S. White (photo) has been named personnel manager.

F. C. McMillan, in charge of aviation radio sales for Western Electric Co., has been appointed chairman of the Aviation Section of the Radio Manufacturers Association's Transmitter Division. He succeeds J. W. Harwood of Bechtel Radio.

Gulf Sharpe, formerly works manager, First World division of Consolidated Vultee Aircraft Corp., has been appointed manager to the general manager of Hughes Aircraft Co.

John E. Little (photo), pilot in military service, has been appointed commanding officer of the 80th Fighter Group of the Army Air Forces. A pilot in aviation, Col. Little was in the Air Corps in the late World War and now leaves the

early air mail carrier for the Post Office department. He formerly was with National Air Transport, predecessor to United. He delivered land-lease aircraft to Russia for the AVG.

Col. Richard E. Plett, commanding officer at the Washington National Airport Army Air Base, has joined PCA in an executive capacity. He will be replaced at the air base by **Col. Chester F. McCarty**, who recently returned from overseas.

Glenn Markt will act as director, airports and buildings for American Airlines in the new airports and buildings section of the Engineering Department. **Elmer Stitzer** has been appointed to develop airport airports and buildings and will report to Markt who in turn reports directly to the vice-president in charge of engineering.

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HEADS CAA 8TH REGION:

Walter P. Plett becomes Administrator of the Eighth Region (Alaska) of the Civil Aerostatic Administration, replacing Marshall C. Stegner, who left the CAA to become Director of the Alaska Division. Plett, who began work with the CAA in 1936, is responsible for directing much of the wartime airway and airport construction in Alaska during the war.



Frank A. Sanderson (photo) has been named advertising and sales promotional manager of Eds Aircraft Corp., College Point, L. I. He will be responsible for directing sales promotional activity for Eds airplane fleet. Sanderson will handle advertising and promotional

work on Eds line of non-aerobatic equipment, to be announced. Prior to the war he was advertising and sales promotion manager for Taylorcraft Aviation Corp. He is an expert in the production of model and training devices.

Jack Corcoran, a veteran of the American Legionnaire Group, has been elected vice-president in charge of maintenance of the National Highway Patrol Council. The group, which fought long and recently organized by former Flying Tigers, A few months ago, Corcoran became senior engineer at La Guardia Field for American Export Airlines. He returned to join National Skyway Freight Corp.

T. P. Wright, Civil Aerostatic Administrator, has been elected vice-chairman of the National Advisory Committee for Aerostatics. Dr. J. C. Hanauer was reelected chairman and also chairman of the executive committee.



AS WESTERN AS Big Horn Sheep!

From the Canadian Rockies to the mountains of old Mexico the BIG HORN from the crags above runs like the massive horns that cut in more than a complete circle above its head, give it its name.

From the Pacific to the Rockies, up both sides of this mountain chain to Canada, Western Air Lines today is flying over 200 miles of airways, bringing air transportation to 31 communities, 7 states and the Province of Alberta. Since 1935 when it carried the first "for pay" passengers in the U.S. on scheduled flights, Western Air has contributed to the development of the West. As applications for new routes are approved and as new, large, faster planes are delivered, Western Air will broaden its service to more of the West.



WESTERN AIR LINES

AMERICA'S PIONEER AIRLINE

General Traffic Offices: 300 W. 6th Street, Los Angeles 14



EVERWHERE YOU LOOK, YOU SEE

Sensenich Propellers



THAT is not an idle boast. Sensenich, in twenty years, has become the world's largest manufacturer of wood aircraft propellers. There is scarcely a pilot in America who hasn't flown behind a Sensenich propeller.

For years, Sensenich has been standard equipment on aircraft powered under 250 HP made by leading aircraft manufacturers.*

Sensenich is stocked and sold by all of the country's leading distributors who, in turn, supply hundreds of aircraft service operators and other retail suppliers.

When you want aircraft or aircars, military or civilian, look at the flight line. You'll find Sensenich right at the rear, nine times out of ten.

When you leaf through the pages of your favorite aviation journals and directories, note the propellers on the ships shown in the editorial pages as well as in the advertisements. More often than not, if the propeller is made of wood, you can see a tiny trade mark shaped like this: That is the sign of Sensenich...the sign of a good propeller...a sign you can trust.

Sensenich Brothers, Adjacent to Municipal Airport, Lancaster, Pa. West Coast Branch, Glendale, Calif.

*Piper, Aeromac, Taylorcraft, Fairchild, Cessna, Stinson, Ryan, Grumman, Bellanca, Howard, Luscombe, Meyers, Morencups, Partenavia, Ercoupe, Fokker, Boeing.

Swing a SENSENICH and be sure

PROP-SHOP. Repair service now available at any type wood propeller. Repair service. Address Sensenich Brothers PROP-SHOP, Lancaster, Pa., or Glendale, Calif.

FINANCIAL

Aircraft Financial Trend Study Shows Dividends Down In '45

Present income reports begin to reflect reduced levels of operations; AVIATION News analysis projects aggregate stockholder expectancy; post-war reserve changes below last year.

Aircraft dividends to stockholders will aggregate less for 1945 than for the previous year. This is disclosed in an analysis, based on recent trends, compiled by AVIATION News.

With widespread military contract cancellations, many aircraft companies have developed conservative tendencies and are inclined to husband all available cash resources.

Current earnings appearing for a few of the aircraft builders show slight declines to comparable periods of a year ago. It is noteworthy, however, that in most instances, current earnings have not been subjected to the extraordinary charges to build post-war reserves which accompanied last year's reports.

In other words, on a comparative basis, present income reports are beginning to reflect a sharply reduced level of operations.

Recently, Boeing Aircraft Company decided not to pay a dividend at this time. During 1944, a total of \$3.00 per share was paid. In April, 1945, \$1.00 per share was paid. This was a surprise to the market, as the price of the stock declined on this non-dividend action. Similarly, Convair, which paid 40 cents per share in 1944, is only paying 25 cents this year.

Douglas maintained its non-dividend policy record by again declining \$5.00 per share, again payable to stockholders on Nov. 20, 1945. Regardless of its high rate of earnings, Douglas has paid this uniformly \$3.00 annually since 1942.

Bell also came through with its usual \$4.00 cash declaration, payable to stockholders of record on Jan. 24, 1946. In addition, the company declared a 10 percent stock dividend. However, this later declaration does not give the stockholders anything new which they did not already have.

The accompanying table shows the 1944 dividend and earnings record for representative aircraft companies. Further, payments made that far in 1945 are also shown.

AVIATION News, in surveying current earnings has attempted to estimate forthcoming dividend actions for various companies and indicates the following projections:

Beech Aircraft paid \$1.00 per share on Oct. 20, 1944, but has not yet acted this year. It is believed that at least 50 cents per share may be paid during 1945.

Bendix is estimated to have earned \$5.00 per share for the year ended Sept. 30, 1945, compared to \$7.22 for the previous fiscal period. It is believed that Bendix will make stock splits as soon as it receives that the quarterly rate of 75 cents per share will be maintained.

Curtiss has continued on a 50 cents quarterly basis and it is believed will continue that policy for the next year at least.

Aviation Corp., which owns about 30 percent of Convair, could use the dividend jocsons.

Cardinal-Wright which paid 75 cents per share on the common last year, will probably pay at least 50 cents this time.

Grumman has already declared

DIVIDEND AND EARNINGS RECORD REPRESENTATIVE AIRCRAFT COMPANIES (For Current Year)

Company	Dividends	
	1944	1945
Beech	\$6.00	\$1.00
Bell	\$1.00	1.00
Bendix	\$2.25	2.00
Boeing	\$7.22	0.00
Cessna	\$1.00	0.00
Convair	\$1.00	0.00
Curtiss-Wright	\$1.00	0.00
Douglas	\$5.00	0.00
Fairchild	\$1.00	0.00
Grumman	\$1.00	0.00
Lockheed	\$1.00	0.00
North Amer.	\$1.00	0.00
Partenavia	\$0.00	0.00
Prop. Corp.	\$0.00	0.00
United Air	\$1.00	0.00

Key: 1945 figures are projected charges.
(a) For the fiscal year end Nov. 30, 1944.
(b) For the period ended June 30, 1944.

the \$1.50 payment for 1945, the same as for last year, but some sources estimate that 1946 will see this rate increased in view of the company's overall excellent outlook.

Lockheed has been paying 20 cents quarterly and may be expected to continue at least for the remainder of this year.

Martin, following a \$3.00 annual rate, has paid \$1.50 earlier this year and is expected to repeat this payment for 1945.

North American Aviation will, for this year, most likely pay less than the \$1.50 per share paid during 1944.

Republic Aviation will pay at least another 25 cents per share, bringing its payment to 50 cents — same as in 1944.

Spruce, which has always followed a conservative dividend policy, will most likely pay another \$1.00 this year for a total of \$3.00.

United Aircraft paid only \$4.00 earlier this year and is expected to equal that amount for the second half. Last year, the company paid \$1.00 per share.

While year-end dividends are usually expected as company corporate custom, the aircraft group may make special disbursements at the turn of the year after the industry outlook is clarified.

It is likely that special liquidation dividends may be declared as operators are transited to present day requirements and the need for extensive working capital will be diminished.

Convair, Fairchild File SBC Earnings Reports

Securities and Exchange Commission reports have listed recent earnings of Consolidated Valves Aircraft Corp. and Fairchild Camera and Instrument Corp.

Convair, during the three months ended Aug. 31, reported total sales of \$497,782,000 of which only \$174,000 represented either their war contract output. On June 1, the company listed \$474,399,000 worth of unfilled war contracts and by Aug. 31 had reduced this amount to \$154,000,000.

For the Fairchild firm, SBC listed sales, during the six months ended June 30, amounting to \$11,250,000 of which \$11,057,900 were estimated to be war contract revenue. Total war orders as of Jan. 1 totaled \$22,008,000 but had risen to \$22,045,000 by June 30.



AVIATION HISTORY IN WAR YOUR GUIDE IN PEACE

A NEW PAGE is turned—and the same Shell Research that first supplied our military aviation with the "makings" of 100-octane to combat quantities, today is concentrated on the development of finer Shell Aviation products for America's peacetime planes.

First to supply the Army with 100-octane fuel in commercial quantities...

First in U. S. to install and operate a commercial plant for Butane



Isooctaneization, a process which made possible new increases in volume of 100-octane...

First to establish a commercial plant using sulphuric acid alkylation—a new process which multiplied 100-octane production ten-fold...

You will find this kind of advanced thinking—backed by the full force of Shell Research facilities—reflected in the quality of Aeroflex lubricating oils and greases, and Shell Aviation Fuels.

SPECIAL AIR SERVICES

CHARTER

NON-SCHEDULED

INTRASTATE

Steamship Firm Plans Intrastate Airline, Outside Control of CAB

Wateman, which first applied for intrastate air services in 1940, schedules Mobile-Muske Shoals flights beginning Nov. 15, using surplus Lockheed.

Augmenting its efforts to enter the air transportation field, a steamship company expects to start an intrastate airline outside the jurisdiction of the Civil Aeronautics Board and the Civil Aeronautics Act.

Waterman Airlines, Inc., a wholly-owned subsidiary of Waterman Steamship Corp., plans to begin cargo flights in Alabama, Nov. 15, adding passenger service shortly thereafter. State Public Service Commission is granting a certificate of public convenience and necessity.

Passenger Basic—A company spokesman in Mobile, headquarters of the airline, said passengers will be carried as soon as three surplus Lockheed 12-passenger planes are delivered and converted.

Under initial schedule, a plane will leave Mobile in the early morning, stopping at Dothan, Montgomery, Birmingham, Huntsville, and Muscle Shoals. Return trip will start about noon, over the same route. Elapsed time each way will be about 2 hours, 45 minutes.

The schedule was arranged to enable South Alabama businesses to transport business visitors and return the same day. A detailed survey will be made to determine whether additional stops should be added to the present route.

Main Base—Mobile's Bates Field will be site of the company's main operations and maintenance base. Sales offices will be established in major cities. Representatives will be on duty at all stops.

Waterman Airlines first filed an application with CAB in 1940, requesting New Orleans-San Juan service via Tampa and Miami, for mail and passengers. In 1943 the request for mail and to serve

Miami, were withdrawn. The company did not seek to carry local traffic between New Orleans and Tampa. In February, 1944, the name of the applicant for the 1,790-mile route was changed to the steamship company.

In addition to several steamship company subsidiaries, the parent Waterman Company controls three firms in freight forwarding which were suspended during wartime: Pan Atlantic Carloading Dispatch Service, Inc., Pan Atlantic Container Dispatch Service of Texas and Louisiana, and Package Car Service, Inc., Ryan Motor Freight Co., Inc., another subsidiary, is at Gulf Florida Terminal Co., Inc., which operates a warehouse, a steamship terminal, a dry and cold storage plant, and a steamship agency business, all at Tampa. Waterman also owns virtually 100 percent of the stock of Gulf Shipbuilding Corp. and Waterman Dock Co. It is co-operator of the Arrow Line, another steamship company.

Proceeds—Waterman starts that service, it is believed to be the first time that a surface carrier will have utilized the device of restricting commercial air operations to one state in order to remain outside the Civil Aeronautics Act.

R. H. W.

Convair Officials Form Charter Line

A new San Diego airplane charter and sales company has been organized by a group of present and former Consolidated Valley Aircraft Corp. officials.

The firm, Nelson-Kelley Co., is headed by A. S. Nelson, former Convair chief of material, and Douglas Kelley, former director of flight.

Floating 'Airports'

A system of floating "airports" throughout the North Atlantic Ocean could be built by Canadian bush operators who would install pontoon hangars on 20 to 30 islands to permit journeys to the vast densely wooded areas for hunting and fishing.

A vessel of the world size J. M. Gray of Air Service Fleet, Ltd., Grimsby, Ont. has also applied to Canadian Air Transport Board for a license permitting scheduled services from Toronto water-front to the islands en route to Europe, using Nordair Norvegas planes, charging \$5 one way, \$20 round trip. Free Grimsby passengers would be taken in smaller four-place float planes on non-scheduled charter basis to the northeast islands.

Gray also offers a complete holiday service with guides, boats, lodges, and other accommodations. He would employ only ex-service veterans.

ATS Members Voting Against U. S. Rule

Association to file brief at end of argument as examiners report proposing CAB regulations.

Members of Aeronautical Training Society, leading aircraft service operators, dealers and distributors, are voting almost 100 percent against regulation by the Civil Aeronautics Board of non-scheduled aviation. They propose that the association file a brief to effect when oral arguments are heard on an examiner's report Nov. 20.

"Up to now the vote shows strongly that our members want the door of aviation opportunity left open not alone for independent operators like themselves but for returning AAF veterans," Wayne Weisner, ATS secretary, said.

Proposed—Under recommendations of the examiners, report on the subject, non-scheduled operations would be restricted to services from fixed bases, and trips limited to 10 trips a month into places having "reasonably direct" service by certified, scheduled carriers. Non-scheduled operators declare the world will hit the air taxi and charter business before it starts and eat off thousands of jobs.

Maryland Line Adding Cities; Increasing Fleet to 7 Planes

Company which started service in July between Washington and Delaware resort, plane equipment and facilities expansion; guide for similar ventures seen.

By BLAINE STUBBLEFIELD

Application has been filed with CAB by Maryland Airlines, Inc., for an interstate 681-mile scheduled airline system, centering in northwest Maryland. It would cut Washington D. C., twin time to ocean beaches from 6 hours and 10 minutes to 45 minutes, about the same distance.

Maryland Airlines is a division of Chesapeake Bay, and its operations make it a special setup for knee-surfing by air. It plans ever faster boats and circumscribed bridge routes. Three interstate air operations have been approved by the Maryland Public Service Commission (AVIATION NEWS, Oct. 22).

Great Demand—But officials of Maryland Airlines felt there was urgent demand last summer for service between Washington and Rehoboth, Del., where air time saving over surface transport is only nominal. The company contends the feeder application, made on the basis of tested demand, is another strong argument in support of Representative Jennings Randolph's resolution pending in Congress. That the government support the extension of the con-

try's air system to small communities.

Maryland Airlines has been operating intensive charter service between Washington National Airport and Rehoboth since July 26, with three Convair 7-20's, or Army UC-34's. Company expects to start charter operations between Baltimore and St. Simons, connect with Washington at Raritan, within two or three weeks, regardless of future action on an interstate application, which includes present routes and those shown on the accompanying map.

Advertising of regular interstate charter runs is not permitted, but observers say the company has been operating virtually on schedule.

During a 30-day period last summer the company carried 788 passengers Washington to Rehoboth, and 742 the other way, operating 7 days a week. 5 trips per day, 4 passengers per trip. Trips per day were later cut to 3.

Leading—The stop at Boston was begun Sept. 26, when Navy released its field there.

The Convairs carry 3 persons to

the back seat and 3 pilots in front. On this operation, one pilot flies the plane and the fourth passenger rides the co-pilot seat. Forty pounds of baggage are allowed per passenger.

Company reports its average passenger fare is about \$3 cents per mile. It has not enough data as yet to determine exact operating costs, but it is convinced they are less than revenue. Officials of the company told AVIATION NEWS they believe their proposed certificate system could operate profitably without the mail or cargo which it will carry if certified. During the summer the present system ran at about 100 percent load factor, and since then the factor has been about 65 percent.

Maryland Airlines converted the first surplus UC-34 that was released, pioneering all the problems involved, including minor structural, electrical and other changes. Total cost per airplane, including decoration, painting, insignia and certification, is about \$3,500. They feel that their groundwork on the conversion will be valuable to other prospective users of this plane, of which they say about 1,000 are available.

Pilot Question—The question of certifying by one pilot an instrument and night flight is up for consideration by CAB-CAB in several different cases. A decision for two pilots probably would make the operation of this size airplane prohibitive on scheduled routes. The company believes that one pilot provides adequate safety, and is confident the government will so rule.

Maryland Airlines officials are keenly aware of the fact that interstate, uncertified airlines will have substantial advantages over certified operations, because of federal safety and economic regulations imposed upon the latter. They call attention to a Supreme Court decision to the effect that the states can limit such as interstate air traffic, and state that in their opinion authorization of air services by state commissioners eventually will be done away with.

The company has made additional purchases and will have 7 planes in all: 6 in operation and 1 standby. Capitalization is \$100,000 paid in. Headquarters is in Easton, Md., where \$50,000 will be spent for hangars, \$32,000 for administration buildings and \$35,000 for sheep. A "model aviation lubrication station" will be established there in cooperation with Cities



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Officials — The management is Granville K. Baker, president; Wayne Johnson, director and associate; Clarence R. McCaskey, attorney; Malcolm L. Hathaway, director and officer; James E. Ryan, director and officer.

Spartan Operating 105-Mile Airline

About 900 passengers carried between Tulsa and Oklahoma City in three months.

Operations of Spartan Airlines, Inc., between Tulsa and Oklahoma City, 105-mile hop, indicate they are paving that a short-haul line can parallel a major airline successfully, to public advantage, unless trunk carriers can meet local traffic demands.

Using a Lockheed 10, the company, affiliated with Spartan School of Aeronautics and Spartan Aircraft Co., flies two round trips a day. Load factor is announced as close to 90 percent. Fare is \$5 each way. In the three months of operation about 900 passengers have been carried. Oklahoma Corporation Commission approved the service after two hearings.

Fare Demands — Officials believe two public demands are being met. First is the assurance that space is available for the short-haul carriers who in recent years have usually been unable to find seats for such short hops. Second, major airlines do not yet have enough schedules to offer early morning and late evening service between many nearby pairs of cities.

"Later, when major airlines will have schedules every hour, the

need for such service by a parallel carrier probably will not exist," a company official said. "Certainly this will be the case if the big lines go in for local runs similar to those on the railroads."

Spartan set up its schedules after an extensive survey of potential patrons. Three thousand letters were sent out asking:

• Are you interested in such a service?

• What schedule would you like?

• What could you afford to pay?

About 1,500 replies were received and from these the two round trips a day were set, a higher off a return flight, day or night, and a full return on the same day.

The transport leaves Tulsa at 7:30 a.m., arriving at Oklahoma City at 8:26 a.m., leaving again at 8:35 a.m., and arriving in Tulsa at 9:25. The afternoon flight leaves Tulsa at 4:55 p.m., departing from Oklahoma City at 4:40 p.m.

Leading Problem — Considerable difficulty is obtaining landing rights at Oklahoma City was encountered because Will Rogers Field had heavy military traffic. Spartan set up its own telephone, and a single house at Bethany Field, north of Oklahoma City. Permission has now been received to operate from Will Rogers, which will improve service.

The line has established an office in Oklahoma City's Brownlow Hotel with a full time representative. Tulsa, Oklahoma, reservations are made through the Mayo Hotel or at Plaza 3 at Spartan School. Ground transportation is furnished by the Tulsa limousine service and by a cab company in Oklahoma City.

So far, the service does not pay its way financially but officials be-

Feeder Aid

Earlier, the Texas federation bid an early sample of airline cooperation. Despite absence of an early response to the proposal, the company found a number of its passengers carrying tickets on its Amarillo-Lubbock route issued by other airlines. Amarillo started carrying passengers Aug. 25.

It would do so with more and larger equipment, when the public has been educated to its availability and convenience.

Feeder Expenses Studied By CAB

Cost of prospective feederline operations, both to the government and the carriers, appears with increasing frequency in a major factor in Civil Aeronautics Board consideration of requests to provide service of this type.

Two main arguments have been held on regional feederline applications—the Rocky Mountain case and the West Coast case. In the latter, as in the Rocky Mountain proceeding, questions by Senate members indicated concern over evident high expenses of feederline operations to the government in mail contracts, traffic potential of small communities, and feasibility of service with equipment now available.

Holds Withheld — Member Hearst Branch apprehensive lest sufficient business to justify high feeder operational cost fail to materialize in the West Coast area, recalled experience with short-line railroads sustained with mail pay, and wondered whether CAB, by condemning certain feederlines, might find itself in a similar dilemma.

General opposition to feeder service by new carriers was led chiefly by United Air Lines and the Western Air Lines System. It brought forth extensive questioning on possibility of such service from trunk line operators. The questioning indicated that in this event, if the service operated at a loss, the problem was whether such loss would be absorbed by the carrier or the government through mail pay.

The West Coast case is the first carrying an examiner's recommendation for continued passenger pickup service.

The problem has been well discussed by William L. Anderson, executive director of the Pennsylvania Aeronautics Commission.

TRANSPORT

Airport Operators Face Crisis As CAA Shuts Down 20 Towers

Balk of municipalities and private interests are finding cost of maintaining war-expanded service is far too costly.

The tower at Harrisburg Airport is slated to be closed Dec. 1 unless the state pays CAA \$30,000 a year to continue operation. Andrew wrote to Administrator T. P. Wright.

CAB representatives and subsequently your office have opposed the states' having anything to do with state airports or the flow of traffic through them. I feel that traffic control towers are part and parcel of your Airways Traffic Control System, and in fact, the principal reason for the large increase in the cost of operating the Harrisburg tower [from \$10,393 to \$33,000] is due to the increased responsibilities you have placed upon control tower operators . . .

Wants Rest — Anderson proposes to make a test call of Harrisburg, permitting the tower to claim in

SHORT FORM TICKET:

Compliance of the new short form ticket being used by the airlines is shown in this picture from Braniff Airways. Comparing it with the longer form it supercedes, is Jack Brough, Braniff's superintendent of operations. Three separate ticket books could handle the trip covered by the old style ticket held by Frank Walker of Aircraft Mechanics, Inc.

order to focus attention on the entire situation.

The objection of many municipalities to reimbursing cost of tower operation is not based entirely on expense. There is considerable freedom in other areas, however, which have been maintaining airways through low landing fees. Control tower operation is viewed as a form of further subsidization, and municipalities argue that the airlines—chief beneficiaries of the towers—should pay at least part of the service which the towers provide for them.

While it is true that landing fees are less than cost of repair and maintenance of runways, they are being increased. Further, airlines are recognizing that the fees in some cases are too low and have initiated discussions on increases.

MEXICAN LINE EXTENDED

The Mexican government recently granted Comunicaciones Aerias de Veracruz, S. A. (CAVAS), an extension of its route to extend its Mexico-Tijuana line to Mexico City. CAVAS may now provide a direct link between the 36,000 capital and the 40 communities it already serves.



Seven Passengers In Maryland Fleet: Passengers shown aboard one of three Convair transports of Maryland Airlines, Inc., which have operated as a non-subsidized carrier since July 20 between Washington, D. C., and Baltimore, Md., with a stop at Elkins, Md. Four more Convairs are being added to the company's fleet, and service to Baltimore and other Maryland points will be added soon, under the present ambitious plans of the new operators.

PICAO Research Coordinating Role Gains Impetus At Parley

Membership seen in agreement that organization should not undertake independent projects but cite need of agency to bind together international efforts; Burden visits session.

Possibility that the Prevalent International Civil Aviation Organization will assume the role of a world-wide coordinating agency for technical research in aviation problems was foreshadowed in last week's meeting of PICAO's Air Navigation Committee in Montreal.

The question was brought to the attention of the committee by the secretary, with the further suggestion that the organization itself might assume some research work which would not involve extensive laboratory and other facilities.

No research—Committee members, however, formally agreed with Sir Frederick Bowell, chairman Kingfisher, who maintained that it would be impossible for the organization to carry on research in addition to its other functions.

At the same time, they agreed that PICAO should act as a coordinating agency to prevent the wasted effort of parallel projects which might have been developed by different member-states. Un-

der the Committee's recommendation PICAO would also bring forward specific problems to the more best qualified to undertake the research.

Now firmly established as a working international organization, PICAO was visited by William A. M. Burden, Assistant Secretary of Commerce for Air.

Exaggeration—Discussing some of the problems of international air transport at a press conference, Burden said he thought economic difficulties embodied in the controversial " fifth freedom" question were exaggerated.

"Many of the economic problems we warned about at Chicago," he said, "don't seem to arise in actual practice."

PICAO's survey corps has confirmed a few senior appointments to the secretariat. Among them is that of E. R. Martin, a specialist on international organization in the Bureau of the Budget, who was appointed liaison officer in the office of the PICAO project.

PICAO 'Climate'

Climate may be an important factor in determining where the Interim Assembly of the Prevalent International Civil Aviation Organization will meet early next year, judging from discussions at the PICAO liaison council meeting at Montreal.

The assembly will hold its first meeting probably in April. Agreements concerning the site and the date have suggested the Canadian city as the place for the assembly was Sir Frederick Bowell, U. K. representative, who maintained it would be logical to meet where the PICAO secretariat is located.

A inquiry was made of Dr. Cesario Gatto, Brazilian delegate, about Rio de Janeiro, and a formal invitation came from Mohamed Roushy Bey of Egypt to convene the assembly in Cairo, where the International Air Transport Association is to meet in October, 1948.

Essair Operation Revision Requested

Essair, Inc., has asked the Civil Aeronautics Board for permission to run turn-around flights from Houston to Austin on its intra-state Texas route.

The line's certificate requires that each point on the route be served on every schedule, but its latest information has shown that Houston-Austin traffic is the heaviest.

▼ **Travel Trendacy**—Of the 461 revenue passengers carried during the first 18 days of September, only 27 went straight through between the two terminals. But 166 traveled between Houston and Austin.

The line began operating Aug. 1, carrying cargo and mail. From Aug. 1 to Aug. 27 all schedules were completed. Passenger service was inaugurated Aug. 28 with two schedules daily. These were raised to four Aug. 31. The company's Lockheed Electras have been loaded with a 35 to 45 percent load factor.

During August, 7,755-lb of mail were carried from Amarillo to Houston and 4,856 in the other direction. Passengers have increased, and lately the line has been leaving Houston with about 300-lb of mail per day.



EASTERN'S LAST MILITARY FLIGHT:

Fight and ground personnel from Caribbean and South Atlantic bases of Eastern Air Lines' Military Transport Division, as Air Transport Command operation, move off the C-47 that ended EA's last military flight, at Miami Oct. 15. Fifteen thousand service men were returned to the U. S. from South American bases during the last four months of Eastern's three and one-half year ATC operation.

TWA Survey Trip Covers Wide Area

Fourteen thousand miles flown over European routes seems after studying many points still lacking air treaty agreements.

Transcontinental & Western Air's survey flight of the European routes returned to Washington a few days ago after stopping at 18 foreign ports, many of them not yet covered by agreement and some not on TWA's certificates of route.

The flight left Washington with 14 observers and crew members, Sept. 26, going on the outbound trip to Gander, Newfoundland; Goose Bay, Labrador; Foyers and Dublin, Ireland; Paris; Geneva; Madrid; Rome and Naples, Athens, and Cairo.

▼ **Flight Log**—The C-54S returned to Washington after more than 14,000 miles of flying, Oct. 23, from Cairo via Bejaia and Tripoli, Libya; Tunis, Tunisia; Algiers, Algeria; Casablanca, Morocco; Lisbon, Portugal; Santa Maria, Azores, and Stephenville, Newfoundland.

Of these, Newfoundland, Foyers, Paris, Switzerland, Madrid, Rome, Athens, Cairo, Benghazi, Tripoli, Tunis, Algiers and Lisbon are in the Civil Aeronautics Board's terminal service pattern for TWA's overseas operations. Goose Bay, Dublin, Naples, and Stephenville are alternates. Casablanca and the Azores are not included in TWA's certificate, which does, however, permit it to operate eastward from Cairo to Bamby. Anyways, survey flights over this part of the route will be made later.

Of the route surveyed, points on the northern leg are most likely to receive the first passenger service when TWA begins its commercial operation, probably not before the end of the month. State Department is working to effect an agreement with other nations on the route.

▼ **Weather Report**—Among the latter is France, with which official agreements can be established soon. There is also hope that such agreements can be reached with Greece and Egypt, whose holdings may be made at Athens and Cairo with fifth freedom, or intermediate, traffic, although possibly on an interim basis. Arrangements to be made with Portugal will govern loadings at Lisbon and probably the Azores.



TWA Ends Survey Flight: Part of the crew on the TWA European survey flight are shown after their return to Washington National Airport, pending over a passport problem. Left to right they are F. R. Henderson, first officer; Clark Tauxer, Air Transport Command flight superintendent for TWA's Inter-Continental Division (not on the survey flight); J. J. Koenigsberg, chief flight radio operator; W. G. Gehre, flight captain; George Metzger, survey secretary, and Thomas M. Sulman, TWA airtop engineer.

Similarly, the situation at Tunis and Algiers likely will be affected by arrangements with France. Libya, Jordan, British, and other countries have been given that a U. S. flag line can pass through Libya, but traffic considerations have yet to be resolved. Data obtained by TWA on the survey flight has been sent to its Kansas City headquarters for study. The men who compiled it are:

Guy L. Arnold, chief navigator; E. C. Ayres, communications engineer; A. A. Beck, chief flight engineer; Waldon G. Gehre, supervisor of operations and captain on the flight; F. R. Henderson, special assistant and first officer; J. J. Koenigsberg, chief flight radio operator; Alvin D. Niemeyer, survey secretary; Alvin D. Niemeyer, Civil Aeronautics Administrative Service; J. Harold Poole, maintenance and equipment; Peter H. Redpath, technical executive; Ray Starnes, senior surveyor; William J. Starnes, photographe; T. M. Sulman, airtop engineer; and Earl Taylor, C-54 equipment engineer.

Avco AA Control Ended By Order

The Civil Aeronautics Board has directed Avco Corp. to divest itself of control of American Airlines by reducing its voting stock in AA to not more than 4 percent of such stock outstanding.

In an order issued last week, the board made final conclusions set forth in its show cause order (AVIATION NEWS, Oct. 18), finding Avco guilty of having "willfully" violated the law. The order also states why a final order should now be issued. Under terms of the order, Avco must file monthly reports through August 1948, with CAB as divestiture status and, within 10 months, such additional evidence as the board may require to show compliance. Divestment must be accomplished by July 31 of next year.

▼ **Cases**—Last week's order closed CAB's investigation begun Sept. 19 to determine whether Avco's holding of 357,338 shares of AA stock constituted control.

IATA Rate Conference Procedure Strongly Criticized By Pan Am

Line sees increased fares as outcome but government officials give informal approval to system set up at Montreal meeting.

The rate conference procedure devised by the International Air Transport Association at its first annual meeting at Montreal has received informal approval of government officials connected with aviation policy but strong condemnation from Pan American Airways.

While the work of IATA was said by officials not to be a proper subject for public comment, it was recalled that the conference mechanism had been favored consistently by the government in preference to rate-fixing by any international organization. On the last day of the government officially headed the IATA arrangement.

Criticisms. It was predicted in Montreal that early acceleration of worldwide air transport would result from the IATA meeting and speakers expressed the opinion that the traffic conferences would promote efficient services at reasonable rates.

But, despite its representation at the IATA meeting where the conferences were approved unanimously, Pan Am contended before the Civil Aeronautics Board last week that high fares would result and let the inference that it would not participate.

Given its legal argument in the present case, Pan Am asserted before Army Air Forces' predicted establishment of traffic conferences in its defense to United States claims and "Some of those who were most enthusiastic for competition have now turned their enthusiasm to the use of the conference procedure for the purpose of holding fares up."

Not specifically mentioning IATA, he added, "If we are going to have quota and conferences, competitive American air service abroad means all the waste and inefficiency associated with duplication of services and facilities with none of the advantages which competition is supposed to bring."

Early Action.—It was predicted meanwhile, that the traffic conferences, especially that for the North Atlantic, would be called soon so that the multitude of problems

leaves confronting airline operations in given areas and along various routes may be tackled and solutions worked out. There still was hope in some quarters that the problem created by Pan Am's rate reduction between New York and London could be settled amicably if "I have never left a meeting with more hope than I do this one," said IATA President H. J. Symington, in response to which John C. Cooper of Pan Am said IATA's success depended in large measure upon Symington's "advice, courage and fair-mindedness."

One of the next steps IATA is expected to take, through its executive committee, of which Cooper is chairman, is to make recommendations to the Permanent International Civil Aviation Organization regarding removal or relaxation of immigration, customs and other governmental restrictions "which are prejudicial to rapid and efficient air transportation." A resolution directing this action, presented by John E. Blister of American Export Airlines, was unanimously adopted at the Montreal meeting.

Results.—In return, the meeting also recorded these results:

1. Election of Sir William Percy Philpot, director-general of civil aviation for the United Kingdom, to be director-general of IATA from April 1, 1948, to December 31, 1952, at a reported salary of \$20,000 (Canadian) annually.

2. Election of Elmer A. Parks of Mississauga, Ontario, to succeed Symington when the next annual meeting opens next October in Cairo.

3. Enlargement of the executive committee from nine to 13 by the addition of Dr. Hansen Sadiq Pasha of MSA to hold office until the close of next year's meeting, Brig. Gen. T. B. Wilson of TWA until the close of the 1947 meeting, and Maj. Gen. T. B. Shen of China National Aviation Corp. until the close of the 1948 meeting.

4. Adoption of a resolution authorizing establishment of branch offices at New York, Paris, Rio

de Janeiro, Cairo, Johannesburg and Sydney as and when deemed advisable.

5. Appointment of Dr. L. C. Tamm to continue as acting secretary and treasurer.

6. Appointment of members of the financial, legal, technical and travel committees.

7. Approval of a budget not made public, for 1948 as submitted by the executive committee and a schedule of dues for the different categories of members for 1948.

8. Adopting of a resolution to the effect that provisions of the Articles of Association regarding termination of membership for failure to operate shall not apply before January 1, 1947.

9. Approval of the report of the executive committee, including the organization of a secretariat and head office, and the rules and regulations as adopted by the committee at its meeting last summer in Paris.

Pattern Controls

Set To Terminate

A letter terminating wartime controls over the air service pattern has been submitted to Secretary of War Patterson. He was expected to sign it immediately, possibly over the weekend.

Because of the difficulties under which changes in the wartime service pattern proposed by the airlines were subject to War Department approval, has been due since the end of priorities, Oct. 15 (AVIATION NEWS, Sept. 23).

War Dept.—Described to attain the utmost utilization of equipment during the war, the controls reached their peak in 1943 and early 1944. In March, last year, the Army turned over to Civil Aeronautics Board the duty of passing on proposed changes, though it was notified in each case and reserved the right to veto. In recent months that right has been used less and less.

The controls were authorized by Executive Order 974, which in turn was augmented by a memorandum May 6, 1942, covering both priorities and service charge control. This memorandum was rescinded last Sept. 6. Since that time there has been but one instance in which the control was employed. In that, the Department approved a request by American Airlines to withdraw service to Long Beach and Palm Springs, Calif.

Traffic Potentials Mark Pacific Case

Final determination soon largely depends upon detailed compilation of passenger possibilities as stored during and afterward.

Traffic generating possibilities will figure prominently in the Civil Aeronautics Board's final determination of routes to be certified across the Pacific and between the United States and Alaska, judging from an arrangement in the Pacific case last week. Various phases of the traffic question were emphasized by most of the applicants and explored further through CAB interrogations.

Request Basis.—Arguing for a North Pacific route were Northwest Airlines, Pan American Airways, Pennsylvania-Central Airlines, and Transcontinental & Western Air Northwest, recommended by Examiners Basil Newmann and Lawrence J. Konner for a route from New York and Chicago to the Philippines (AVIATION NEWS, Sept. 23), asked the board to make Seattle a gateway to the Orient by granting it a Seattle-Alaska segment connecting at Anchorage. The extension, Northwest contended, would strengthen the entire North Pacific route by tapping additional traffic in the Pacific Northwest area.

Pan American, adhering to its traditional view against competition, maintained that the volume of air traffic in the Pacific would not be sufficient to permit two competing lines to operate economically and efficiently. Should the board certificate another carrier to the Orient, PAA felt that it should be allowed to obtain rights to a route which "has the vision to larvae, and the courage to procreate." Rather than be "shocked" to the central Pacific route recommended by the examiner, PAA asked to be given a chance of competing for traffic from Chicago and points east by operating over the northern route from Seattle.

PCA contended that the board should follow the trade area concept established in the North Atlantic case and select the carrier on the basis of ability to generate traffic. In this connection, PCA pointed to the large number of cities it serves and could link with the Orient, including New York, Chicago, Detroit and Washington.

TWA argued for a route from San Francisco to India via Seattle, Alaska, and traffic producing areas in Japan, Korea, Manchuria, and China. Such route would compete with that granted TWA in the North Atlantic case and enable it to provide round-the-world service.

The carrier and that such extension of its route was necessary in order not to place it in a disadvantageous position resulting from breaking the route in the middle of the important European transatlantic traffic flow.

CAB Member.—Oswald Ryan, representing a committee opinion which the board will probably consider in making its final decision. He asked whether CAB is under duty, in view of section 3 of the Civil Aeronautics Act, requiring preservation of inherent advantages of air transportation, to permit non-stop international operations over Great Circle routes, and to be considered in cases where a carrier is required to stop at intermediate points is the factor of

traffic diversion from other carriers.

Proposals for new or additional U.S.-Alaska service, involving applications by Alaska Airlines, Pan Am, United Air Lines, Western Air Lines, and Woolley Airways, were closely scrutinized by board members. Applicants were questioned on sources and destination of traffic, passenger estimates, effect of competition, and ratio between traffic and population.

Philadelphia Terminal

Representatives of Eastern, National, TWA, and United airlines have submitted plans for an international air terminal at Philadelphia's Spadina Airport, a co-terminal on North Atlantic air routes.

Blueprints envision an ultramodern administration building, ultimately to have four wings and cost an estimated \$1,000,000. The first structure would cost between \$700,000 and \$1,000,000.



At Pacific Case Argument. The Civil Aeronautics Board, operating at 88 percent of its statutory five-man strength, is shown above as it listened last week to oral arguments in the Pacific route case. The four Board members have heard five oral arguments since the resumption of Vice Chairman Edward F. Warner, Sept. 20, of which the Pacific case, involving international routes, was the most prestigious. Others were in the Rockies, Rocky Mountain, West Coast, and Florida route proceedings. The Board's restoration to full strength awaits appointment by President Truman of a successor to Warner. Left to right, members shown are Oswald Ryan, Chairman L. Welch Pogue, Herkis Branch, and Jack Lee. Other picture shows the crowd at the Pacific argument. Seth Richman, attorney for Northwest Airlines, is speaking.





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Chicago Board Picks New Airport Site

\$40,000,000 project would be located 17 miles southwest of Loop, beyond present field.

Prospects for Chicago's new airport improved last week with a recommendation by the city's Airport Selection Board of a site near Park Ridge, Ill., about 17 miles northeast of the Loop and just a half mile west and 12 miles north of the present municipal airport.

The new location, unannounced choice of the Selection Board, is a field adjoining the closed plant, owned by the Army, where Douglas Aircraft Corp. made four-engine cargo planes during the war. Cost—Total tract may encompass 5,335 acres, with two highway locations. Cost is estimated at \$40,000,000.

Since two weeks will be required to draft the report and prepare accompanying exhibits, it will not be presented formally to Mayor Edward J. Kelly before Nov. 15. Chicago's city council will have final say on the selection, but since the mayor is assured to have approved the report, the council is expected to go along.

The Board recommends that the present airport be used pending completion of the new one, and thereafter for whatever need it can best fill. After the new airport is placed in service the present one likely will be used for cargo and unhandled flying for a time, and eventually for cargo only.

Details. Under the Board's plan, terminal buildings would occupy an area 8,000 x 4,500 ft. in the center of the new field, reached by a tunnel from a superhighway. Airline hangars would be placed on 1,000 acres of rental land at the edge of the airport and be four wings. Runways would be of the tangent-type, eight of them 8,130 ft. long, and 12 of 7,700 ft. Two of the latter might possibly be extended later to 12,000 ft.

Estimates are that the distance of the proposed airport from the Loop will be cut to 15 miles by present and contemplated superhighways, with eventual motoring time well under the 20 minutes needed to get to the present municipal airport 12 miles from downtown Chicago.

Expectation is that the new field will meet a day earlier.

Comment Asked

The question of a separate airworthiness category for transport planes used exclusively for cargo is being revisited, and airlines have been asked to submit comment on the issue to the Air Transport Association not later than Nov. 19.

In proposing a new Part 84 of the Civil Air Regulations, governing airworthiness requirements for U.S. transport planes, the CAB recently held hearings on which were presented at the hearings on proposed changes in the regulations to justify establishment of separate standards of airworthiness for passenger and cargo aircraft. The result is the certification requirements and the same for planes in either group.

Representatives of the airlines took no stand on the question, placing lack of time to study it. Manufacturers advocated a separate cargo category, while the government and the Association agreed to remove the request, with the support of additional data.

ATA called attention to the possibility that a separate cargo category might mean different safety standards for cargo planes than those used to carry passengers. It also asked airline comment to aid it in formulating its own policy.

will be big enough to handle whatever traffic may develop in the next 25 years. Compared with the present municipal airport, which handles about 250 operations daily and has a top capacity of 120 an hour, a part of the new complex could handle 360 arrivals and departures hourly, according to supporters of the plan.

Chairman of the Selection Board, which also is charged with continuing studies to develop the pattern for the entire airport program of the Chicago area, is Merrill C. Meigs, aviation enthusiast and former newspaper publisher.

ATA Meeting Set

Annual meeting of the Air Transport Association membership will be held at the Carlton hotel in Washington Nov. 27 for election of directors and consideration of other business. The present board will meet a day earlier.

Prompt Market Bid Asked By Officials

An appeal for prompt and efficient action by all U.S. aviation government agencies, in competition with private concerns, to have a world trip as quickly as the CAA officials recently returned from a world tour as guests of the Air Transport Command.

The three, who visited 42 points along a 37,000-mile route to study air operations and facilities, are Fred M. Lomax, assistant administrator for safety regulations; Chris M. Lemple, director, Air Navigation Facilities Service, and J. L. Kirney, director, Flight Operations Service.

"Customer" Loss—Among the 14 points in their conclusions was the finding that lack of preparedness on the part of U.S. aviation in caring for "customers" by key equipment and seek advice elsewhere. They also urged immediate action by the U.S. to obtain control of certain landing areas and associated facilities which are administered by military bases among other certain Pacific islands, so as to alleviate stops.

Citing a wide difference between military and commercial transport operations, the trio cautioned against relaxation in CAB requirements for navigational facilities for civil air carriers and emergency standards for pilots and crews. They urged that carefully selected CAB personnel be stationed at each of the countries to be served by U.S. flag lines.

PCA Files Notice Of Service Changes

Pennsylvania-Central Airlines notified the CAB last week of a number of service changes effective Nov. 15, among them resumption of service between Norfolk and Knoxville via five intermediate points on AM 81. The service had been suspended since May, 1942, because of the war.

New point on the route will be Elizabeth City, N.C. O'Dwyer, previously served, are Rocky Mount, Raleigh-Durham, Greensboro-High Point, and Asheville-Buncombe.

PCAs on the same date will inaugurate service to Elkins-Contour and Rochester, N.Y., on AM 8. Service to Williamson, Pa.,

on the same route, suspended since October, 1942, because of inadequate airport facilities, will be resumed.

Four non-stop round trips daily are being started between Washington and Akron on AM 14, Detroit and Youngstown on AM 14, Flint and Grand Rapids on AM 15, and Washington and Rochester on AM 14.

PCA notification was the only one received by the Board up until last week, but United Air Lines announced separately it will inaugurate direct service into Detroit, effective Jan. 3.

TWA International Officials Announced

Top officials of Transcontinental & Western Air's new International Division were announced last week by T. B. Wilson, managing director and chairman of TWA Board.

Ole P. Bryan will be vice-president, operations; Dean J. Harscom, director of traffic; and Maurice E. Sheshas, director of budgets and methods.

Bryan has been with TWA since 1938. A 2,000-mile-pilot, he was vice-president in charge of

war projects, directing TWA's Intercontinental Division which operated for the Air Transport Command. Harscom previously was in the Stearman business, with which he was general passenger agent in charge of the Eastern area until 1933. Sheshas was appointed to TWA after three and a half years with the Army Transportation Corps in the China theater. He has 25 years of transportation background.

The new division was created recently by TWA directors to handle its overseas operations. The company now consists of one executive staff and two operating divisions—International and Transcontinental. Paul E. Richter, formerly of the Naval Air Transport Service, has returned to TWA as executive vice-president. E. Lee Tolman is senior vice-president. J. A. Collins, vice-president of transportation, will continue in charge of the Transcontinental Division operation, according to President Jack Frye.

As part of the changes in the creation of the International Division, Robert E. Lewis will be executive assistant to Wilson. Lewis has been with TWA since April, 1943.



PCA INSPECTS C-54 CONVERSION:

PCA officials visited the Glenn L. Martin Co. plant at Baltimore last week to inspect the conversion of the basic type C-54s recently acquired by the airline. The ships are being fitted to carry 55 passengers. First to go into service by the end of the year and others in an initial fleet of 12 early in 1944. Photo shows, left to right, Vice-president J. H. Carmichael and Luther Morris, Chief Engineer B. J. Pierling, and President C. Bedell Moore of PCA, and Pelego Magruder and Warren Jones of Martin.

Representation for Dealers

THIS SURPLUS PROPERTY ADMINISTRATOR, W. Stuart Symington, has indicated to AVIATION NEWS a willingness to organize a fourth aviation industry advisory committee representing the nation's thousands of independent aircraft dealers and distributors.

An editorial on this page Oct. 23, titled "Mr. Symington's Oversight," noted that while the Administrator was setting up separate committees of advisors from the airlines, the aircraft manufacturers, and government aviation agencies, there were no indications of his intention to utilize the

years of experience of the many thousands of the country's aircraft dealers.

"The only reason for our being here is to serve everybody in every group, and certainly we should include the independent aircraft distributors and dealers," Mr. Symington writes AVIATION NEWS.

The sensible attitude and willingness to right a wrong which the new Administrator displays is heartening contrast to the漫management and bungling inherent in surplus disposal which prevailed for many months before Mr. Symington came to town.

Public Relations in California

A REVERSING PUBLIC ATTITUDE at low flying aircraft and noise, with stubborn opposition to new airports in some areas, should be reminding many an aviation business man that not all citizens have yet been converted to starry eyed air enthusiasts. Nor, strangely enough, do many of them display any eagerness to become imbued.

The war is over, and John Q. Citizen considers that he put up with at least his share of inconveniences and taxes to get it over. He concedes that aviation went a long way to wipe out the axis. For that he is grateful. But from him on, he says, what does he owe to commercial aviation? Let it get along as best it can, on its own initiative and competitive merit like may other businesses. He feels commercial flying cannot expect to capitalize indefinitely on the wartime achievements of the air forces. He may need to be shown more and more as war memories dim why he should, for example, put up more taxes for airports.

Of course, if John Citizen acquires a personal interest in flying, or goes into aviation himself for a livelihood, or learns first hand the advantages of air transportation in his own business, that is the answer which assures the future of commercial aviation. It is the answer to the plea for more airports, lower fares, cheaper lightplanes and better lightplants, and all the rest of aviation's far-flung dreams.

The most conspicuous example of a community's realization that it must win the public is a surge of organizational activities in California, prompted by the prospect of a special session of

the state legislature to consider aviation legislation proposals.

A significant action has been Gov. Earl Warren's reinstatement of the Aviation Projects Committee of the California Reconstruction and Reemployment Commission, and the scheduling of a series of committee hearings in San Francisco and Los Angeles to consider airport problems, aviation taxation, and the possible creation of a state aviation commission.

At Los Angeles an attempt is being made to band together airlines, aircraft manufacturers, airport operators, and aircraft distributors in an association to raise a working fund of at least \$50,000 a year to finance a state-wide aviation public relations program which will "sell" aviation to that big non-flying segment of the public and bring into focus at the state capital the attitude of the various branches of aviation concerning future proposed legislation.

During the past month a series of localized aviation conferences has been held by Chambers of Commerce in the state's population centers, and in Southern California the Los Angeles Chamber of Commerce is planning to hold its second California Aviation Conference within a few months. Other communities could well take a lesson from the progressive Californians in this matter of public relations. It is noteworthy, too, that, in this region at least, the airlines, fixed base operators, and the other varied interests who depend, directly or indirectly, upon flying for a livelihood, give indication of working together.

ROBERT H. WOOD



"WINGS INTO FLOWERS" as painted by James Saxon of the Inland Steel & Disc Division of West Pullman, Illinois. Of the many interesting operations in this plant perhaps the most material is the rolling of high-carbon sheet metal in manufacturing disc plates, disc brakes, clutches and gear drums. This great Borg-Warner plant is the world's largest producer of flying discs for the farm implement industry.

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Typical of the many outstanding performance records established by Timken Bearings for PCA is that of the veteran Capitaliner "Cleveland", which, in the words of Barney Vierling, PCA's Chief Engineer, "has just rounded out 16,761 hours of flight time. The "Cleveland" was drafted for military service by the Army Air Corps early in the war and has just recently been returned to PCA and is flying again on our regular routes."

"On the basis of airline estimates," Vierling continues, "this plane has made a total of 13,027 landings—averaging four landings for every three hours of flight during military service, and one landing per hour during commercial work."

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